

**SAMSUNG**



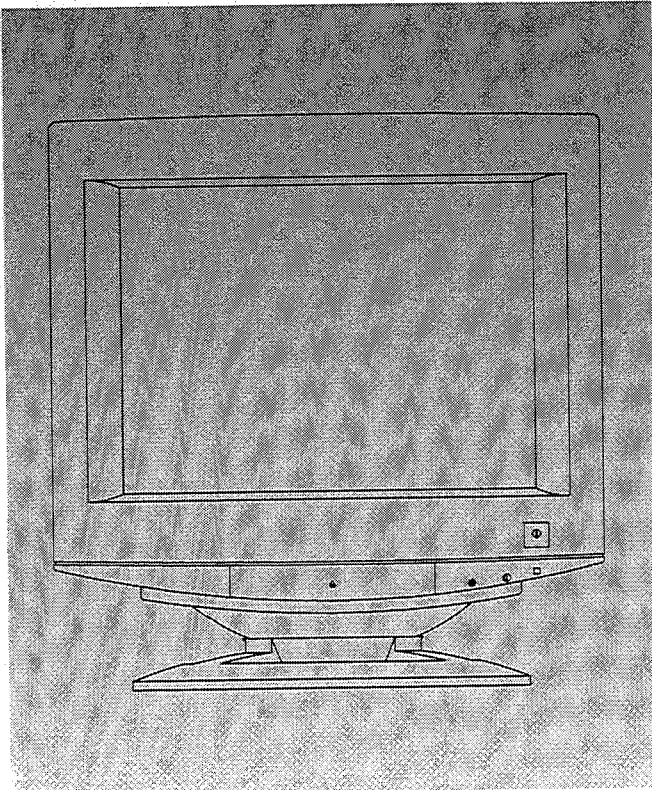
**V16032**

# **COLOR MONITOR**

**SyncMaster 15GLi (CMB5477L)**

## ***SERVICE* Manual**

### **COLOR MONITOR**



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SyncMaster 15GLi Service Manual

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# 1 Precautions

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Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock and X-rays.

## 1-1 Safety Precautions

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### 1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power before servicing.
3. When the chassis is operating, semiconductor heat sinks are potential shock hazards.

### 1-1-2 Servicing the High Voltage System and Picture Tube

1. When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead. (Disconnect the AC line cord from the AC outlet.)
2. Do not lift the picture tube by the neck.
3. Handle the picture tube only when wearing shatterproof goggles and after completely discharging the high voltage anode.

### 1-1-3 X-Rays and High Voltage Limits

1. Keep the high voltage below the specified maximum level. Be sure all service personnel are aware of the procedures and instructions covering X-rays.  
The only potential source of X-ray in current solid state display monitors is the tube. However, the picture tube does not emit measurable X-ray radiation if the high voltage is as specified in the "high voltage check" instruction. Only when high voltage is excessive are X-rays capable of penetrating the shell of the picture tube, including the lead in glass material.
2. It is essential that service technicians have an accurate high voltage meter available at all times. Check the calibration of this meter periodically.

3. High voltage should always be kept at the rated value, no higher. Operation at high voltages may cause failure of the picture tube or high voltage circuitry and, also under certain conditions, may produce X-rays in excess of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-ray problem. Test the brightness and use a meter to monitor the high voltage each time a color monitor comes in for service. Make sure the high voltage does not exceed its specified value and that it is regulating correctly.
5. The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
6. When troubleshooting a monitor with excessively high voltage, avoid being unnecessarily close to the monitor. Do not operate the monitor longer than is necessary to locate the cause of excessive voltage.

### 1-1-4 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment cover or shields, isolation resistor-capacitor networks, mechanical insulators, etc.

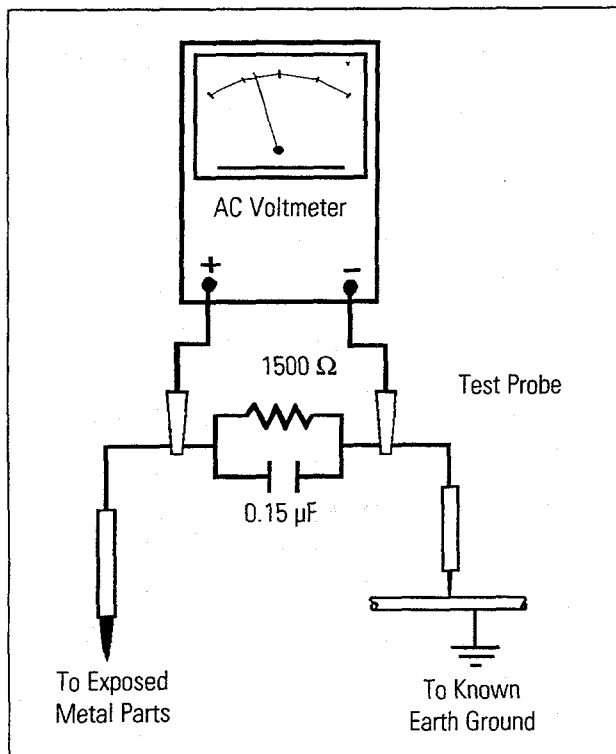



Figure1-1. Leakage Current Test Circuit

### 1-1-5 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by  on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and / or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

3. To be sure that no shock hazard exists, check for leakage current in the following manner:
  - a. Plug the AC line cord directly into a 120 Volt AC outlet. (Do not use an isolation transformer for this test)
  - b. Using two clips leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with an exposed metal cabinet part and a known earth ground, such as an electrical conduit or electrical ground connected to an earth ground.
  - c. Use a SSVM or VOM with 1000 ohms per-volt or higher sensitivity to measure the AC voltage drop across the resistor (see Figure 1-1).
  - d. Connect the resistor to an exposed metal part having a return path to the chassis (metal cabinet, screw heads, knobs, shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  - e. Any reading of 5.25 Volt RMS (this corresponds to 3.5 milliampere AC) or more is excessive and indicates a potential shock hazard. Correct the shock hazard before returning the monitor to the user.



## 1-2 Servicing Precautions

**Warning:** An electrolytic capacitor installed with the wrong polarity might explode.

**Caution:** Before servicing instruments covered by this service manual and its supplements, read and follow the Safety Precautions section of this manual.

**Note:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

### 1-2-1 General Servicing Precautions

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect an electrical plug or connector, (c) connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

### 1-2-2 Insulation Checking Procedure


Disconnect the attachment plug from the AC outlet and turn the power on. Connect the insulation resistance meter (500 V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (see note) should be more than 1 Mega ohm.

**Note:** Accessible conductive parts include metal panels, input terminals, earphone jacks, etc.

### 1-3 Electrostatically Sensitive Devices (ESD) Precautions

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Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. Be sure to remove it prior to applying power to avoid a shock hazard.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.
9.  marks parts for ESDs on schematic diagrams and electrical parts list.

**Caution :** Be sure no power is applied to the chassis or circuit and observe all other safety precautions.

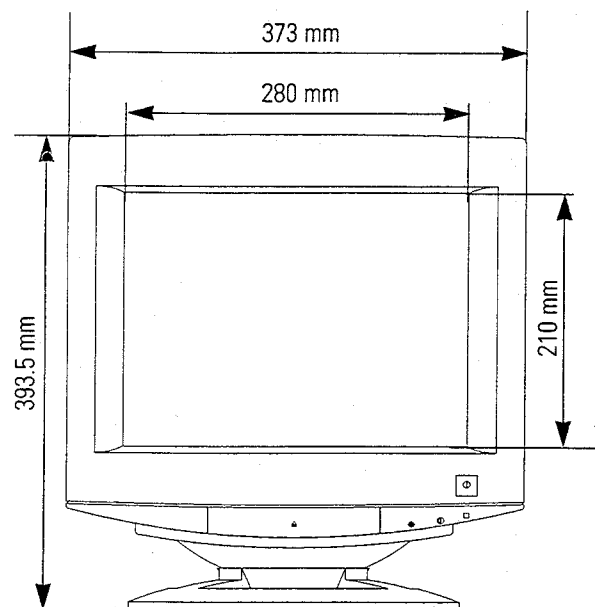
## 2 Specifications

Classification	Specification
Picture Tube:	15-Inch (38 cm): 14-Inch (36 cm) Visual, Full Square/Flat Face Tube, 90° deflection, 0.28 mm Dot pitch, Semi-tint, Non-glare, Antistatic silica coating, Invar shadow mask.
Scanning Frequency	Horizontal : 30 kHz to 65 kHz (Automatic). Vertical : 50 Hz to 120 Hz (Automatic).
Display Colors Analog Input	Unlimited Colors.
Maximum Resolution	Horizontal : 1280 Dots. Vertical : 1024 Lines.
Input Video Signal	Analog 0.714 Vp-p Positive at 75 $\Omega$ Terminated.
Input Sync Signal	Separate Sync : TTL level Positive/Negative. Composite Sync : TTL level Positive/Negative.
Video Bandwidth	110 MHz.
Active Display	Horizontal : 267 mm $\pm$ 3 mm (4:3 ratio). Vertical : 200 mm $\pm$ 3 mm.
Input Voltage	AC 90-264 Volt, 60 Hz/50 Hz $\pm$ 3 Hz.
Power Consumption	90 Watt (Max).
Dimension	Unit (HxWxD) : 15.5 x 14.7 x 15.7 Inches (393.5x373x400 mm). Carton (HxWxD) : 17.7 x 18.3 x 20.4 Inches (450x465x517 mm).
Weight	Net/Gross: 29.3 Lbs (13.3 kg) / 33.7 Lbs (15.3 kg).
Environmental Considerations	Operating Temperature: 32° F to 104° F (0° C to 40° C). Humidity : 10 % to 80 % Storage Temperature : -4° F to 113° F (-20° C to 45° C). Humidity : 5 % to 95 %.

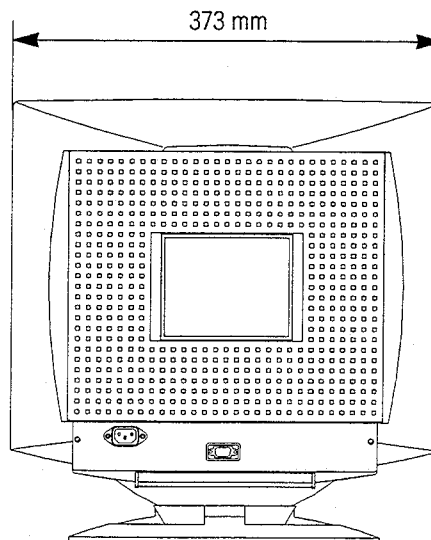
- The SyncMaster 15GLi model complies with SWEDAC (MPRII) recommendations for reduced electric and magnetic fields.
- **Note:** Designs and specifications are subject to change without prior notice.

## 2-1 Dimensions

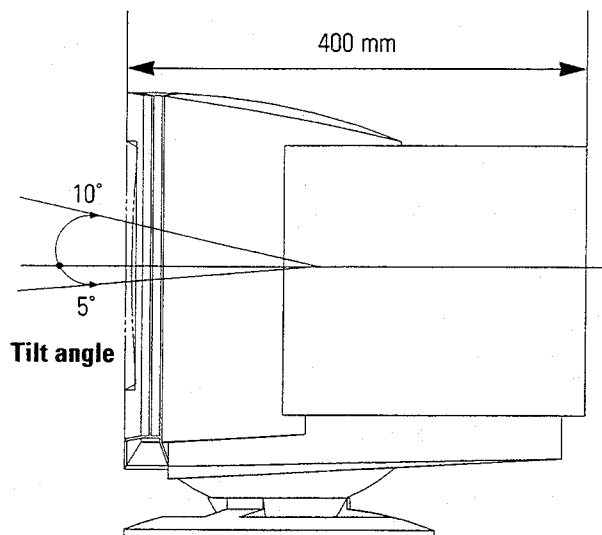
2-1-1 Front View



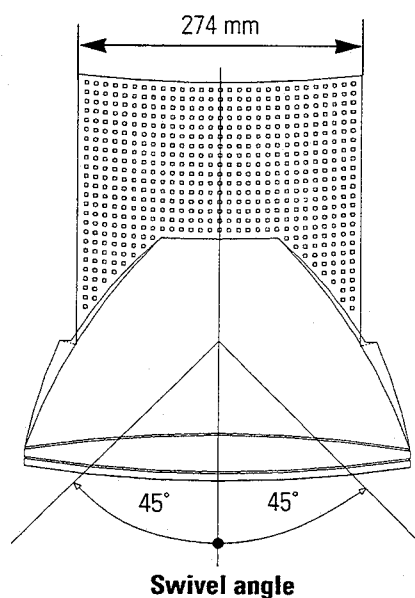
2-1-3 Rear View



2-1-2 Side View



2-1-4 Top View



## 2-2 Pin Assignments

Pin No.	Sync Type	15-Pin Signal Cable Connector (Figure 2-1)		Cable Adapter (Figure 2-2)
		Separate	Composite	Macintosh
1		Red	Red	GND-R
2		Green	Green	Red
3		Blue	Blue	H/V Sync
4		GND	GND	Sense 0
5		DDC Return	DDC Return	Green
6		GND-R	GND-R	GND-G
7		GND-G	GND-G	Sense 1
8		GND-B	GND-B	Reserved
9		Reserved	Reserved	Blue
10		GND-Sync/Self-Raster	GND-Sync/Self-Raster	Sense 2
11		GND	GND	GND
12		DDC Data	DDC Data	V-Sync
13		H-Sync	H/V-Sync	GND-B
14		V-Sync	Not Used	GND
15		DDC Clock	DDC Clock	H-Sync

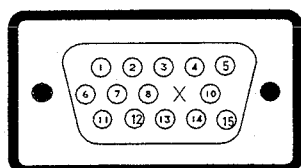


Figure 2-1. Male Type

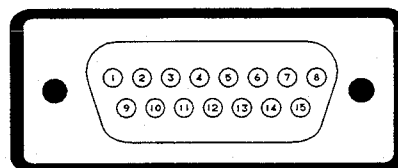


Figure 2-2. Male Type

## Memo

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## 3 Operating Instructions

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This section of the service manual explains how to connect the SM15GLi color monitor to IBM or PC-compatible computers, as well as to Apple Macintosh computers. It also shows the location of the monitor's front panel controls, explains their functions and gives examples that show how to properly adjust these controls.

### 3-1 Installation

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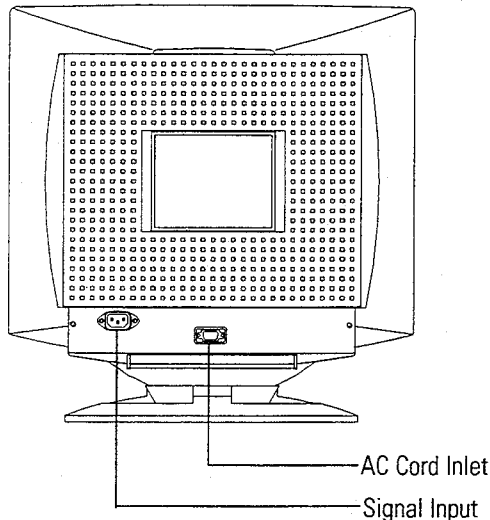


Figure 3-1. Rear of Monitor

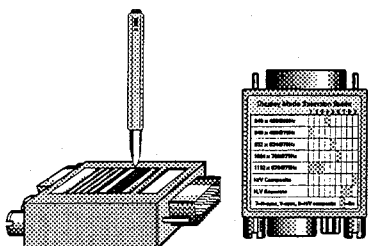
#### 3-1-1 Connection to Your Computer IBM or PC-Compatible

To install your monitor, follow these steps:

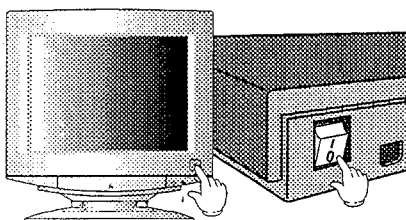
1. Turn off the power to the monitor and computer.
2. Place the monitor on a flat, sturdy surface.
3. Connect one of the 15-pin D-sub connectors on the signal cable to the video port on your computer. Tighten the attachment screws. (Refer to your computer owner's manual for the location of the video connector.)
4. Connect the other 15-pin D-sub connector on the cable to the signal input connector on the back of the monitor. Tighten the attachment screws.
5. Connect the power cable to the monitor and plug the power cord into the power outlet.
6. Adjust the screen tilt and swivel to suit your needs.
7. Turn on your computer and then the monitor.

### 3-1-2 Connection to Your Computer MacintoshII Family Computers

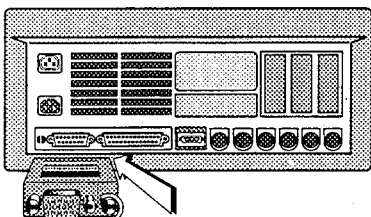
1. This monitor requires a cable adapter for use with a Macintosh computer. The MacMaster Cable Adapter supports all monitors and all Macintosh, Centris, Quadra, Duo Dock, and Power Macintosh computers. If you do not already have a cable adapter, check with your computer dealer.
2. Refer to your computer and cable adapter User's Manuals to help determine the appropriate display mode and resolution. This monitor supports 640x480, 832x624 and 1024x768 resolutions for the Macintosh. The resolution most highly recommended is 832x624.
3. Set the display mode and resolution using the DIP switches on the cable adapter.



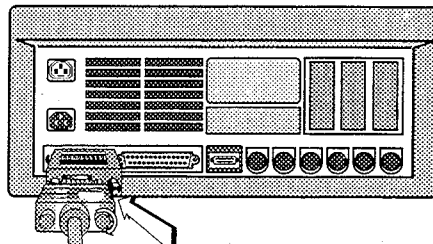
4. Power off your Macintosh computer and monitor including other peripheral devices.



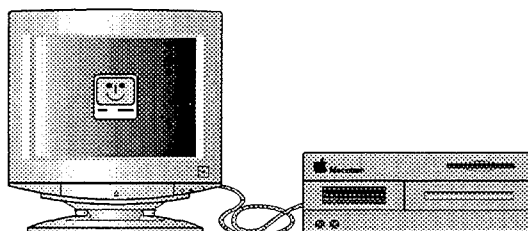
5. Connect the cable adapter to the video port of the Macintosh computer. Tighten the screws on the cable adapter.



6. Connect the monitor signal cable to the other end of the cable adapter. Tighten the screws of the monitor signal cable onto the cable adapter to ensure proper connection.



7. Connect one end of the power cord to the monitor and the other end to the power outlet.
8. Power on your monitor and Macintosh computer. If you see any message on your monitor screen, installation is complete. If you do not see any messages, check each of your connections and DIP switch settings and reboot your system.



9. If you need more information, please refer to the MacMaster Cable Adapter User's Manual, or contact the Technical Support Center.



## 3-2 Front View and Controls

### 3-2-1. Front View

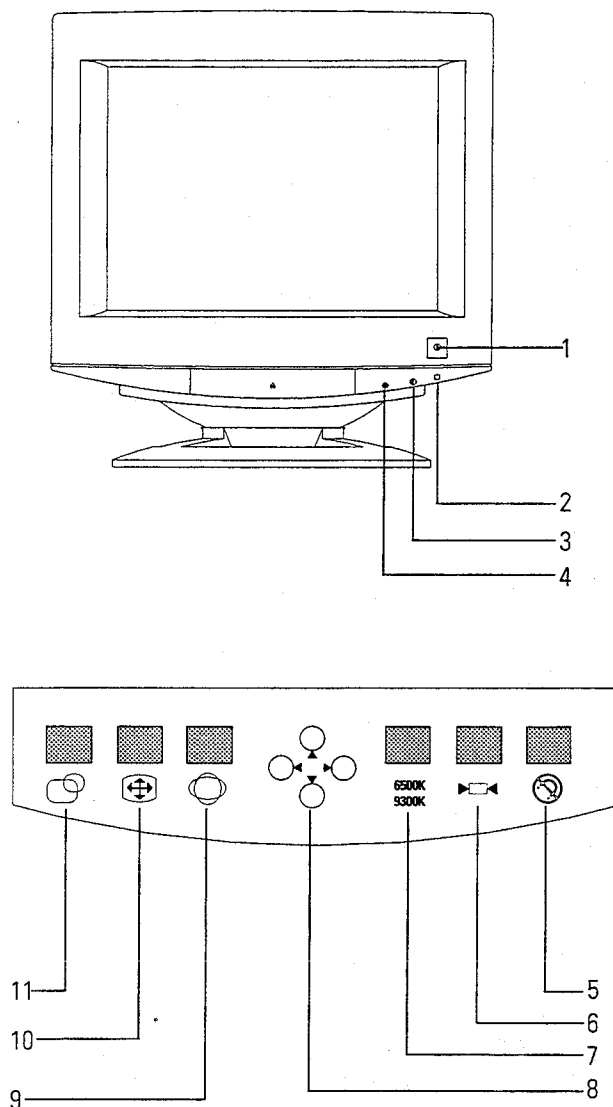


Figure 3-2. Front Control Panel

### 3-2-2 Front Control Panel

Location	Symbol	Description
1		Power Button (Push)
2		Power Indicator LED (Dual Color)
3		Contrast Control
4		Brightness Control
5		Degauss Button
6		Recall Button
7		Color Temp. Control
8		Adjustment Control
9		G/D (Geometric Distortion)
10		Size (H/V) Information
11		Position (H/V) User, Preset Mode

### 3-3 Controls and Functions

#### 3-3-1 Basic Controls and LED Indicator Functions

##### Power button:



The power button turns the monitor power on and off. Push the power button once to turn monitor power on; the power on indicator LED also turns on. Push the button again to turn monitor power off.

##### Power indicator (Dual color):



The power indicator shows the state of your monitor.

When the monitor operates normally, the indicator LED glows green.

When the monitor operates in one of the power saving modes, the indicator LED is orange or blinks orange and green.

##### Contrast control:



The contrast control adjusts the degree of difference between dark and light areas of the image.

##### Brightness control:



The brightness control adjusts the overall brightness of the display image.

##### Adjustment Control



Use Adjustment Control buttons to adjust the display image while a control function is active (the indicator is orange). However, you cannot adjust the display image while a control function is disabled (the indicator is green).

Push the up (▲) or right (►) button to increase the value of the adjustment function. Push the down (▼) or left (◄) button to decrease the value of the adjustment function.

**Note:** The monitor automatically saves your preferred display settings 3 to 4 seconds after the last adjustment.

#### 3-3-2 Microprocessor Controls and Functions

##### General Description

This monitor has mode display settings for each of the standard timing signals listed on the timing chart. The monitor automatically adjusts itself to an optimum size and position when it senses one of the standard timing signals. However, some users may wish to adjust the monitor to their own preferred settings rather than the factory settings. The monitor's microprocessor automatically saves the new settings for a specific timing signal and automatically adjusts itself when the monitor senses that signal. See pages 4-1 and 4-2 for the standard timing chart.

##### On Screen Display

The monitor features an On Screen Display (OSD) that shows information about the display settings. The OSD appears on the screen when you select a function button. The OSD shows the name, range and current setting of the control function. In addition, the OSD shows the current input signal frequency and the list of user and factory preset timing. The OSD remains active for approximately 10 seconds after completion of any adjustments.

##### Control Function Buttons

The monitor uses single and multi-function buttons. Single function buttons, when pressed, allow access to one of the control functions. Multi-function buttons can access a second function in addition to the first one. To access the second adjustment function, push the function button twice. The chart below shows you the buttons that allow access to a second function.

Table 3-1. Multi-Function Control Buttons

Button No.	Push Once	Push Twice
11	Position (H/V)	User, Preset mode
10	Size (H/V)	Information
9	Pincushion/ Trapezoid	Parallelogram/ Pinbalance

**Position (H/V) / User, Preset Mode****First Function: Position (H/V)**

Push this button once to adjust the horizontal and vertical position (centering) of the display.

Horizontal position control

Push position button and adjust horizontal position with left ( ◀ ) and right ( ▶ ) buttons.

Vertical position control

Push position button and adjust vertical position with up ( ▲ ) and down ( ▼ ) buttons.

**Second Function: User, Preset Mode**

Push this button twice to access the user and preset modes. The OSD shows the contents of the user modes and factory preset timing modes. Use the adjustment control buttons to "page" through the list.

**Size (H/V) / Information:****First Function: Size (H/V)**

Push this button once to adjust the horizontal and vertical size of the display.

Horizontal size control

Push size button once and adjust horizontal size (width) with left ( ◀ ) and right ( ▶ ) buttons

Vertical size control

Push size button once and adjust vertical size (height) with up ( ▲ ) and down ( ▼ ) buttons

**Second Function: Information**

Push this button twice to access the Information function. The OSD shows the values for this monitor's specifications. Use the Adjustment Control buttons to page through the list.

**G/D (Geometric distortion):****First Function: Pincushion/ Trapezoid**

Push this button once to correct for pincushion and trapezoid distortions of the display.

Pincushion control

Push G/D button once to display the pincushion OSD. To correct the vertical sides of the display area from bowing in (pincushion) or bowing out (barrel distortion), use the left ( ◀ ) and right ( ▶ ) buttons until the sides are straight

Trapezoid control

Push G/D button once to display the pincushion OSD. Push either the up ( ▲ ) or down ( ▼ ) button to display the trapezoid OSD. Use the up ( ▲ ) and down ( ▼ ) buttons again to correct any trapezoidal distortion of the display.

**Second Function: Parallel/Pinbalance**

Push this button twice to adjust the Parallel and Pinbalance of the display.

Parallel control

Push G/D button twice to display the parallel OSD. Adjust the parallel of the display with the left ( ◀ ) and right ( ▶ ) buttons.

Pinbalance control

Push G/D button twice to display the parallel OSD. Push either the up ( ▲ ) or down ( ▼ ) button to display the pinbalance OSD. Use the up ( ▲ ) and down ( ▼ ) buttons again to correct vertical distortion of one or both sides.

**Color Temperature**

6500K  
9300K

Use this button to choose the color temperature of the display. After pushing the color temperature button, use the up ( ▲ ) or down ( ▼ ) button to select between 9300°K color (channel 1) and 6500°K color (channel 2).

### Recall

- ▶◀ Use this button to recall factory preset settings. When you push the recall button, the indicator LED changes color from green to orange (the same as any other function) and the OSD appears.

Hold down the recall button for several seconds until the indicator LED's color changes to green, this indicates that the factory settings for that timing have been recalled. The OSD shows the progress of the recall function.

**Note:** This operation resets all of the data in the user memory area for the current signal timing.

### Degauss



Magnetic fields can build up on the CRT and cause color impurity. Use the degauss button to demagnetize the CRT.

Push the button once to activate the degaussing circuit. The degaussing circuit automatically turns itself off after a few seconds.

**Warning:** Don't hold this button down for longer than 3 seconds. If you do, it resets all of the data in the user memory area. If this occurs, you must remake your user adjustments.

## 3-4 Power Management System (Power Saving Function)

If your computer system features a display power management function, this monitor, when signaled, enters power saving modes. The purpose of power management is to automatically reduce power consumption while the computer system is temporarily not in use. This monitor can enter three different power saving modes as described below.

**Note 1:** When used with a computer equipped with DPMS (VESA), this monitor is EnergyStar compliant.

Table 3-1. Display Power Management Signaling (DPMS) Standard

State Items	Normal Operation	Stand-by Mode	Suspend Mode	Power Off Mode
Horizontal Sync	Active	Inactive	Active	Inactive
Vertical Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
Power Indicator	Green	Orange	Orange/Green Blinking	Orange Blinking on-off
Power Consumption/hr	90 W (MAX)	75 W (Normal)	Less than 15 W	Less than 5 W

#### Note 2:

1. This monitor automatically returns to a normal state of operation when horizontal and vertical sync return (when you move the mouse or press a keyboard key).
2. When you use the power button to turn off the power while in power off mode, the indicator LED may continuously blink on-off for up to 15 seconds.
3. If the signal cable is removed, the DPMS function does not operate. In that case, a self raster displays.

## 4 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 4-1. Timing Chart

Mode Timing	IBM			VESA		
	VGA1/70 Hz 640x350	VGA2/70 Hz 720x400	VGA3/60 Hz 640x480	640/72 Hz 640x480	640/75 Hz 640x480	800/75 Hz 800x600
fH (kHz)	31.469	31.469	31.469	37.861	37.500	46.875
A $\mu$ sec	31.778	31.777	31.777	26.413	26.667	21.333
B $\mu$ sec	3.813	3.813	3.813	1.270	2.032	1.616
C $\mu$ sec	1.907	1.907	1.907	4.064	3.810	3.232
D $\mu$ sec	25.422	25.422	25.422	20.317	20.317	16.162
E $\mu$ sec	0.636	0.636	0.636	0.762	0.508	0.323
fv (Hz)	70.086	70.087	59.940	72.809	75.000	75.000
O msec	14.268	14.268	16.683	13.735	13.333	13.333
P msec	0.064	0.064	0.064	0.079	0.080	0.064
Q msec	1.907	1.080	1.048	0.739	0.427	0.448
R msec	11.122	12.711	15.253	12.678	12.800	12.800
S msec	1.176	0.413	0.318	0.237	0.027	0.021
Clock Frequency (MHz)	25.175	28.322	25.175	31.500	31.500	49.500
Polarity H.Sync	Positive	Negative	Negative	Negative	Negative	Positive
V.Sync	Negative	Positive	Negative	Negative	Negative	Positive
Remark	—	—	—	—	—	—

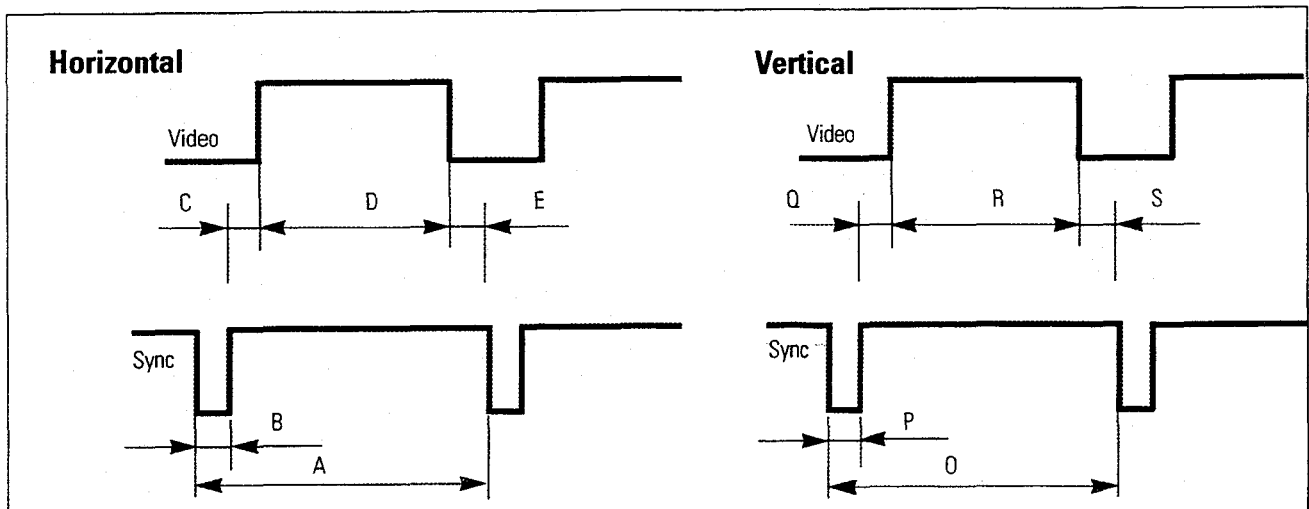
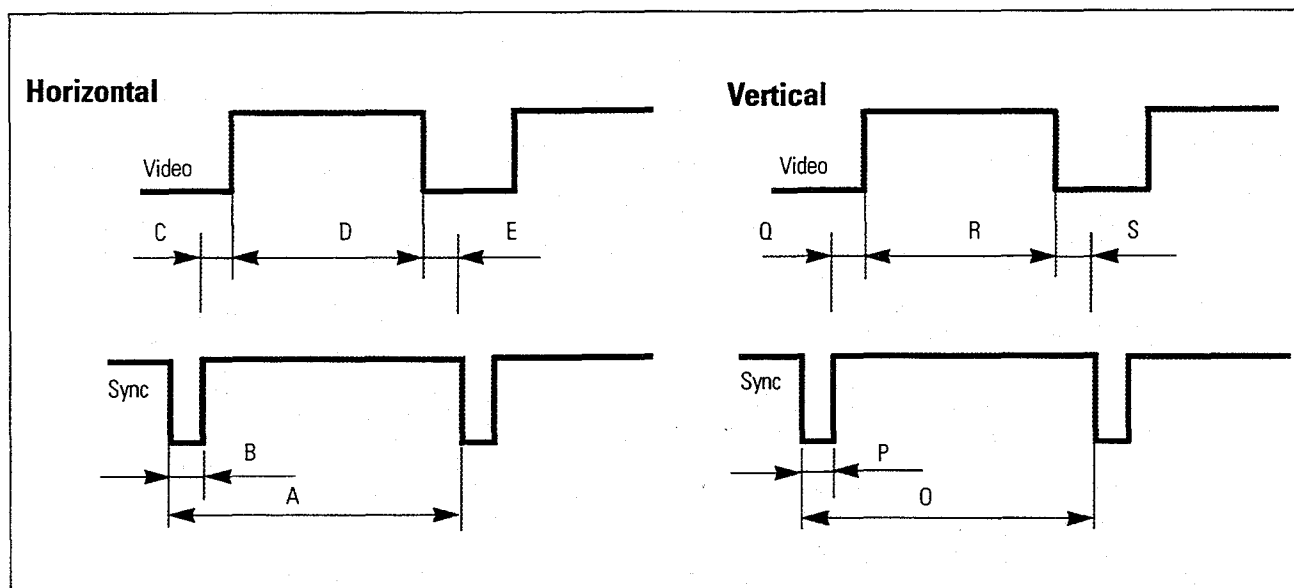


Table 4-1. Timing Chart Continued

Mode Timing	IBM		SIGMA	ATI	Apple Mac.
	1024/60 Hz 1024x768	1024/75 Hz 1024x768	640/120 Hz 640x480	1280/60 Hz 1280x1024	832/75 Hz 832x624
fH (kHz)	48.363	60.023	61.275	63.953	49.726
A $\mu$ sec	20.677	16.660	16.320	15.636	20.110
B $\mu$ sec	2.092	1.219	0.800	1.018	1.117
C $\mu$ sec	2.462	2.235	2.400	2.255	3.910
D $\mu$ sec	15.754	13.003	12.800	11.636	14.524
E $\mu$ sec	0.369	0.203	0.320	0.727	0.559
fV (Hz)	60.004	75.029	120.619	59.938	74.551
O msec	16.666	13.328	8.291	16.684	13.414
P msec	0.124	0.050	0.131	0.078	0.060
Q msec	0.600	0.466	0.310	0.579	0.784
R msec	15.880	12.795	7.834	16.012	12.549
S msec	0.062	0.017	0.016	0.016	0.020
Clock Frequency (MHz)	65.000	78.750	50.000	110.000	57.284
Polarity H.Sync	Negative	Positive	Negative	Negative	Negative
V.Sync	Negative	Positive	Negative	Negative	Negative
Remark	—	—	—	—	—



---

## 5 Disassembly and Reassembly

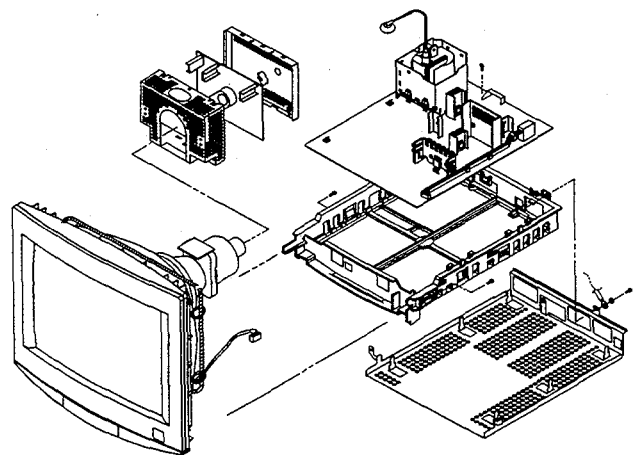
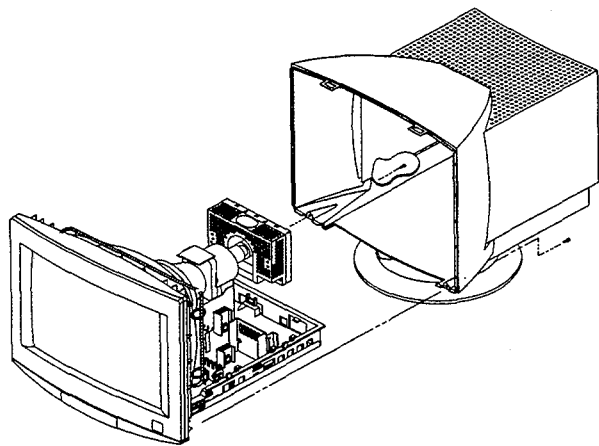
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This section of the service manual describes the disassembly and reassembly procedures for the SyncMaster 15GLi monitor.

### 5-1 Disassembly

---

1. Stand monitor on its front with the screen down and the base closest to you. (Make sure nothing will damage the screen)
2. Pull the snap downward from the PCB frame and push the stand assembly backward from the PCB frame.



3. Working from the back of the monitor, remove the four screws.
4. Tip the cabinet away to release tabs and pull it up and away from the monitor.

5. Remove the two screws.

### 5-2 Reassembly

---

To reassemble the monitor, follow the instructions for disassembly, but use the reverse order.

## **Memo**



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## 6 Alignments and Adjustments

---

This section of the service manual explains how to control the linearity, raster, size, position, pincushion, parallelogram, trapezoid, and pinbalance. Additionally, this section describes how to use the micom control jig to make the adjustments.

### 6-1 Adjustment Conditions

---

**Warning:** Changes made without the micom jig are saved only to the user mode settings. As such, the settings are not permanently stored and may be inadvertently deleted by the user.

#### Power Supply Voltage

AC 90 ~ 264 volt (60/50 Hz $\pm$ 3 Hz).

#### High Voltage Control

Adjust VR501 to 25 kV $\pm$ 0.2 kV.

**Note:** When using PHILIPS CRT, set the high voltage to 24 $\pm$ 0.2 kV.

#### Testing and Burn-in Mode

For testing and burn-in, remove the signal cable from the monitor. Power on the monitor and warm it up. Use the burn-in mode to age the monitor.

#### Warm-Up Time

The display must be on for 30 minutes before starting alignment. Warm-up time is especially critical in color temperature and white balance adjustments.

#### Signal

Video analog 0.714 Vp-p positive at 75 ohm terminated.

Sync: Separate/composite  
(TTL level negative/positive).

#### Scanning Frequency

Horizontal : 30 kHz-65 kHz (Automatic).  
Vertical : 50 Hz-120 Hz (Automatic).

Unless otherwise specified, adjust to 640x480 mode (H : 37 kHz, V: 75 Hz) signals. Refer to table 4-1 on page 4-1 and 4-2.

---

### 6-2 Prepare Main PCB for Adjustment

---

#### +B 85 V Line Adjustment

(No beam, Contrast: Min, Brightness: Min)

Adjust VR601 to be DC 85 V $\pm$ 1 V at TP601 and GND.

#### High Voltage Adjustment

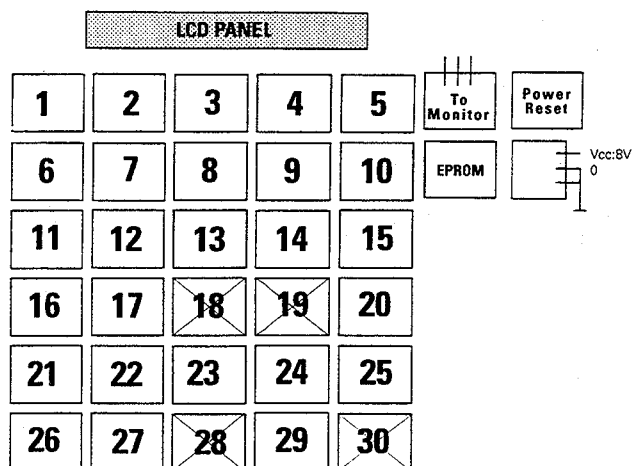
(No beam, Contrast: Min, Brightness: Min)

Adjust VR501 to 25 kV $\pm$ 0.2 kV (For other CRTs).  
Adjust VR501 to 24 kV $\pm$ 0.2 kV (For PHILIPS CRT).

#### Horizontal Raster Center

Adjust SW401 so that the back raster comes to the center when you apply a signal of 37 kHz/75 Hz.

### 6-3 Block Diagram of the Microcomputer Control Jig



#### Notes:

Selecting the monitor series and type:

1. Simultaneously press buttons **29** and **24** to select "M-Project" as the monitor series.
2. Press button **25** to select the monitor type. Hold down button **25** until you see "M15H" plus the OEM name for the monitor under test. For example, hold down button **25** until you see "M15H" if you are working on a "Dell 15."

Table 6-1. Micom Control Jig Function Keys

Key No.	General Control Key Function	Color Control Key Function
1	Horizontal Position Up	R-Gain Up
2	Horizontal Position Down	R-Gain Down
3	Parallelogram Up	ACL Up
4	Parallelogram Down	ACL Down
5	General Save	Color Save
6	Horizontal Size Up	G-Gain Up
7	Horizontal Size Down	G-Gain Down
8	Vertical Linearity Up	Color CH-1 Standard Save
9	Vertical Linearity Down	Color CH-2 Standard Save
10	Standard Save	ACL Save
11	Vertical Position Up	B-Gain Up
12	Vertical Position Down	B-Gain Down
13	Pinbalance Up	No Function (Don't Use)
14	Pinbalance Down	No Function (Don't Use)
15	All mode save	No Function (Don't Use)
16	Vertical Size Up	R-Bias Up
17	Vertical Size Down	R-Bias Down
18	No Function (Don't Use)	No Function (Don't Use)
19	No Function (Don't Use)	No Function (Don't Use)
20	User Mode Delete	No Function (Don't Use)
21	Barrel	G-Bias Up
22	Pincushion	G-Bias Down
23	Color/General Control toggle	Color/General Control toggle
24	F-Project/M-Project toggle	F-Project/M-Project toggle
25	Model Selection	Model Selection
26	Trapezoid Up	B-Bias Up
27	Trapezoid Down	B-Bias Down
28	No Function (Don't Use)	No Function (Don't Use)
29	Shift	Shift
30	No Function (Don't Use)	Manual/Auto Color Control

### 6-2-1 General Control

Use general control to test and adjust the shape and size of the display.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "General Control."
2. Standard Save: Press button **10** to do a memory data dump and load the standard picture data from the EPROM on the micom control jig.

**Note:** This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.

3. Optimize the standard timing mode (37 kHz /75 Hz) using the micom control jig, or the monitor controls, as described on pages 6-4 and 6-5 of this manual.
4. After completing all standard timing mode adjustments, press button **15** to save the data for all modes. The monitor's microprocessor adjusts the other modes according to a predefined formula.
5. Using a signal generator, scan the other timing modes and make adjustments as needed. Each time you make a change, press button number **5** to save the data.

### 6-2-2 Color Control

Use color control to test and adjust the color coordinates the monitor displays.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "Color Control".
2. Press button **8** (for 9300K setting) or **9** (for 6500K setting) to do a memory data dump and to load the standard picture data of color from the micom control jig.

**Note:** This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.

3. Optimize the standard timing mode using the micom control jig, or the monitor controls, as described on pages 6-6 and 6-7 of this manual.
4. Press button **5** to save the picture color data.
5. Press button **10** to save ABL data.
6. When you are through, disconnect the micom control jig and proceed with other tests and adjustments.

## 6-4 Display Control Adjustments

---

### Unless otherwise specified, adjust the EXT-VR:

Contrast : Max. (Fully clockwise)  
Brightness : Max. (Fully clockwise)

#### Horizontal Size Adjustment

Adjust minimum picture size of VGA1/70 Hz (refer to page 4-1) to 260 mm using VR401.

##### With microcomputer control jig:

Press the horizontal size up button (6) or horizontal size down button (7) to adjust the horizontal size of the display pattern to 267 mm. (The tolerance is  $\pm 3$  mm.)

##### Without microcomputer control jig:

After pushing the size button, push the (►) button or (◄) button to adjust the horizontal size of the display pattern to 267 mm. (The tolerance is  $\pm 3$  mm.)

#### Vertical Size Adjustment

##### With microcomputer control jig:

Press the vertical size up button (16) or the vertical size down button (17) to adjust the vertical image or pattern to 200 mm. (The tolerance is  $\pm 3$  mm.)

##### Without microcomputer control jig:

After pushing the size button, push the (▲) button or (▼) button to adjust the vertical size of the display pattern to 200 mm. (The tolerance is  $\pm 3$  mm.)

#### Horizontal Position Adjustment

##### With microcomputer control jig:

Press the horizontal position up button (1) or the horizontal position left button (2) to center the image or test pattern on the raster.

##### Without microcomputer control jig:

After pushing the position button, push the (►) button (move right) or (◄) button (move left) to center the image or test pattern on the raster.

#### Vertical Position Adjustment

##### With microcomputer control jig:

Press the vertical position up button (11) or vertical position down button (12) to center the vertical image or pattern on the raster.

##### Without microcomputer control jig:

After pushing the position button, push the (▲) button (move up) or (▼) button (move down) to center the image or the test pattern on the raster.

#### Vertical Linearity Adjustment

##### With microcomputer control jig:

Press the vertical linearity up button (8) or vertical linearity down button (9) to optimize the image or the test pattern.

#### Trapezoid Adjustment

##### With microcomputer control jig:

Press the trapezoid up button (26) or trapezoid down button (27) to make the image or the test pattern rectangular.

##### Without microcomputer control jig:

After pushing G/D button once, push the (▲) button or (▼) button to make the image or the test pattern rectangular.

#### Pinbalance Adjustment

##### With microcomputer control jig:

Press the pinbalance up button (13) or pinbalance down button (14) to optimize the image or test pattern.

##### Without microcomputer control jig:

After pushing G/D button twice, push the (▲) button or (▼) button to optimize the image or test pattern.

### **Parallelogram Adjustment**

#### **With microcomputer control jig:**

Press the parallelogram up button (3) or the parallelogram down button (4) to make the image or test pattern rectangular.

#### **Without microcomputer control jig:**

After pushing G/D button twice, push (▶) button or (◀) button to make the image or test pattern rectangular.

### **Side Pincushion Adjustment**

#### **With microcomputer control jig:**

Press the barrel button (21) or the side pincushion button (22) to straighten the sides of the test pattern or image.

#### **Without microcomputer control jig:**

After pushing G/D button once, push (▶) button or (◀) button to straighten the sides of the test pattern or the image.

### **Save the Data**

#### **With microcomputer control jig:**

To save the picture data for a mode, push the mode save button (5).

### **Degauss**

#### **Without microcomputer control jig:**

Magnetic fields can build up on the CRT and cause color impurity. Use the degauss button to demagnetize the CRT. Push the button once to activate the degaussing circuit. The degaussing circuit automatically turns itself off after a few seconds.

### **To Delete the User Mode Data**

#### **With microcomputer control jig:**

To delete the picture data of user's mode, push user's mode delete button (20).

#### **Without microcomputer control jig:**

To delete the picture data of user's mode, press the degaussing button for 5 or more seconds.

## 6-5 Color Adjustments

**Note:** To make color adjustments you must have one of the following configurations:

1. Micom Control Jig and Signal Generator.  
or
2. Micom Control Jig and Computer and Samsung DM 200 software or DisplayMate for Windows software from Sonera Technologies.

Before making adjustments check that the video signals are as follows:

Video : Analog 0.714 V<sub>p-p</sub> (at 75  $\Omega$  terminated).  
 Sync : Synchronizing: Separate TTL level.  
 Unless otherwise specified, use VGA signals (37 kHz/75 Hz) for the adjustments.

### 6-5-1 Color Adjustments for 9300°K

#### 6-5-1 (a) Adjustment of the Back Raster Color (37 kHz/75 Hz, Back raster pattern)

1. Turn the contrast and the brightness controls fully clockwise (Maximum condition).
2. Adjust the screen VR of the FBT so that the brightness of back raster is 0.3 to 0.5 ft-L (Typically 0.4 ft-L).
3. Press button **8** to download the standard color data (channel 1) from the micom jig.  
 (For 9300° K color adjustment:  
 $x = 0.283 \pm 0.02$ ,  $y = 0.298 \pm 0.02$ .)

For 6500° K color adjustments see section 6-5-2 "Color Adjustment for 6500° K."

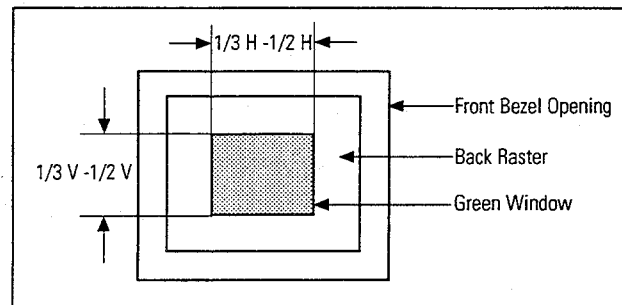
4. Press buttons **26** and **27** and set the "y" coordinate to  $0.298 \pm 0.02$ .
5. Press buttons **16** and **17** and set the "x" coordinate to  $0.283 \pm 0.02$ .

**Note:** If the above adjustments cannot be done to each coordinate, press buttons **21** and **22** and repeat procedures 4 and 5.

6. After the adjustments are done, press button **5** to save the data.

#### 6-5-1 (b) Video Gain Adjustment (37 kHz/75 Hz, Green box pattern)

1. Display the green window pattern using a range for which the ACL Circuit is not active (within ranges  $1/3$  to  $1/2H$  and  $1/3$  to  $1/2V$ ).



6-1. Green Box Pattern

2. Turn the contrast and the brightness controls fully clockwise.
3. Press buttons **6** and **7** (G-Gain control) so that the brightness of the green gain is  $42 \pm 1$  ft-L. (Typically 42 ft-L)

**Note:** If you can't increase the green gain to the appropriate value, press button **3** to increase the ACL point.

#### 6-5-1 (c) White Balance Adjustment (37 kHz/75 Hz, Full white Pattern)

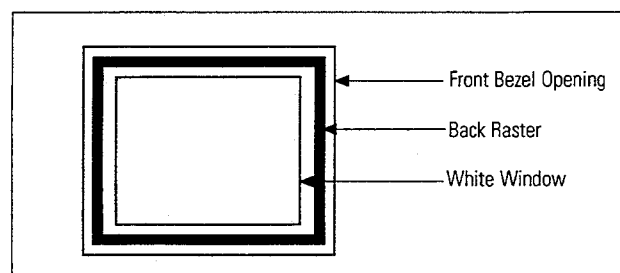


Figure 6-2. Full White Pattern

1. Turn the contrast and the brightness controls fully clockwise.

- Press buttons **11** and **12** and buttons **1** and **2** to make the video white.  
(For 9300° K color adjustment:  
 $x = 0.283 \pm 0.02$ ,  $y = 0.298 \pm 0.02$ .)

**Note:** Do not touch buttons **6** and **7**.

- Press button **5** to save the data.

#### 6-5-1 (d) White Balance Fine Adjustment

( $x = 0.283 \pm 0.02$ ,  $y = 0.298 \pm 0.02$ ,  
Full White pattern)

**Note:** Do not touch buttons **6** and **7** (G-Gain).

- Adjust the contrast control so that the brightness of the video is about 5 ft-L.
- Check whether the white coordinates of the video meets the above coordinate spec or not.
- Adjust the contrast control so that the brightness of the video is about 20 ft-L.
- Check whether the white coordinates of the video satisfies the above spec or not.
- If the white balance differs from the above spec, readjust it to within specifications.  
When correct, press buttons **5** to save.

#### 6-5-1 (e) ACL point Adjustment

- Display the full white pattern.
- Turn the contrast and the brightness controls fully clockwise.
- Press buttons **3** and **4** (ACL) so that the brightness is  $32 \pm 1$  ft-L.
- Press button **10** to save the ACL setting value.

### 6-5-2 Color Adjustments for 6500°K

#### 6-5-2 (a) Back Raster Color Adjustment

- Display the back raster pattern.
- Turn the contrast and the brightness controls fully clockwise.
- Pressing button **9** load the standard color data of 6500°K from micom control jig.
- If you need to set the brightness of back raster to set 0.5 to 1.0 ft-L, then press button **21** or **22** (G-Bias control). If you don't need to do, skip this step.

**Note:** In the case of 6500° K adjustment you must not control the screen VR of FBT. If you do so, the 9300°K setting value are changed.

- Using buttons **26**, **27**, **16** and **17** adjust the R-Bias and B-Bias values to  $x = 0.313 \pm 0.02$ ,  $y = 0.329 \pm 0.02$ .
- Press button **5** to save the bias data of 6500°K.

#### 6-5-2 (b) Video Gain Adjustment

- This procedure is the same as that of 9300°K.
- Refer to the procedure for 9300°K on page 6-6.

#### 6-5-2 (c) White Balance Adjustment

- Display a full white pattern.
- Turn the contrast and the brightness controls fully clockwise.
- Using buttons **11**, **12**, **1** and **2**, set the R/B gain data to  $x = 0.313 \pm 0.02$ ,  $y = 0.329 \pm 0.02$ .

#### 6-5-2 (d) White Balance Fine Adjustment

Refer to the procedure for 9300°K on page 6-6.

#### 6-5-2 (e) ACL Point Adjustment

Refer to the procedure for 9300°K on page 6-6.

## 6-6 Focus Adjustment

1. Display the H character pattern so that the focus adjustment can be done. (Apply 1280x1024/60 Hz mode to the monitor.)
2. Turn the contrast and the brightness controls fully clockwise.
3. Adjust the focus control of the FBT so that the focus display the sharpest possible image.

## 6-7 CRT Tilt Adjustment

Reassemble the CRT with fastening screws so that the dimensions A, B and C, D are separately equal.

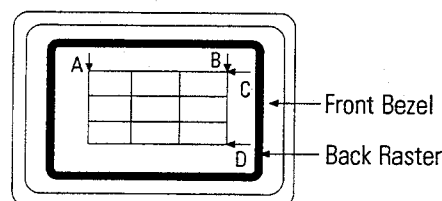


Figure 6-3. CRT Tilt Adjustment

## 6-8 Purity Adjustment

**Note:** Color purity adjustments are not available for monitors using Phillips CRTs.

Use the following procedure to correct minor color purity problems:

1. Make sure the display is not affected by external magnetic fields.
  2. Very carefully break the glue seal between the two-pole purity convergence magnets (PCM) and the convergence bow magnets (see figure 6-12).
- Caution:** The convergence bow magnets are not user or service technician adjustable. Do not allow these magnets to move. Also break the seal between the two PCMs.
3. Make sure the spacing between the PCM assembly and the CRT stem is 29 mm±1 mm.
  4. Display a red pattern over the entire display area.

5. Adjust the purity magnet rings on the PCM assembly to display a pure red pattern. (Optimum setting:  $X \geq 0.620$  and  $Y \leq 0.336$ )
6. Adjust each corner and the center to meet the red color tolerances listed below.
7. Repeat steps 4 through 6 using a green pattern and again, using a blue pattern.

Table 6-2. Color Purity Tolerances

Red:	$X \geq 0.62 \pm 0.02$	$Y \leq 0.34 \pm 0.02$
Green:	$X \geq 0.31 \pm 0.02$	$Y \leq 0.59 \pm 0.02$
Blue:	$X \geq 0.14 \pm 0.02$	$Y \leq 0.06 \pm 0.02$

(For 9300°K color adjustment:  $X = 0.283 \pm 0.02$ ,  $Y = 0.298 \pm 0.02$ )

8. When you have the PCMs properly adjusted, carefully glue them together to prevent their movement during shipping.

## 6-9 Convergence Bow Adjustment

Convergence bow adjustments are not available for any of the CRTs used in the SyncMaster 15GLi monitors. While the Toshiba CRTs have convergence bow magnets, they are sealed in the CRT factory and are not user or service technician adjustable. Do not touch these magnets (see Figure 6-12). Phillips CRTs do not have convergence bow magnets, and, therefore, no convergence bow adjustments are available. If color purity is out of alignment, replace the CRT.

Bow misconvergence should not exceed the values listed below:

Table 6-3. Bow Misconvergence Tolerances

Position	Error in mm	CRT Dot Pitch
Center	0.3	0.28
Edge	0.4	0.28

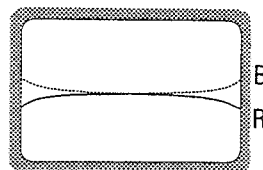


Figure 6-4. Bow Misconvergence



## 6-10 Static (Center) Convergence

Switch the monitor on and warm it up for 15 minutes. Display a crosshatch pattern on the screen. Convergence errors should not exceed the values listed below.

Table 6-4 Convergence Error Tolerances

Position	Error in mm	CRT Dot Pitch
Center	0.3	0.28
Corner	0.4	—

Use the following steps to correct any static then disconvergence:

- As shown in Figures 6-11 through 6-12, the three CRTs used in SyncMaster 15GLi monitors use the following magnet configurations:

Table 6-5. Magnet Configurations

CRT Manufacturer	Magnet Order from Front of CRT
Toshiba	Convergence bow, two-pole, six-pole, four-pole
Phillips	four-pole, six-pole

- Locate the pair of four-pole magnet rings.
- Rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue lines.
- Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue lines.
- After completing the red and blue center convergence, locate the pair of 6-pole magnet rings.
- Rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue (magenta) and green lines.
- Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue (magenta) and green lines. Don't rotate the 2-pole magnet because it is for purity adjustments.
- Lock the locking plastic. Mark the correct position for the magnets and apply a small line of glue to hold the magnets in place.

### 6-10-1 Alignment of Red and Blue with the 4-pole magnet

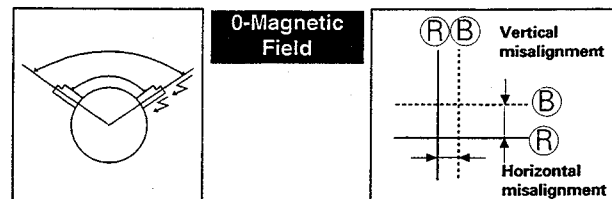


Figure 6-5. Movable in Spread Condition

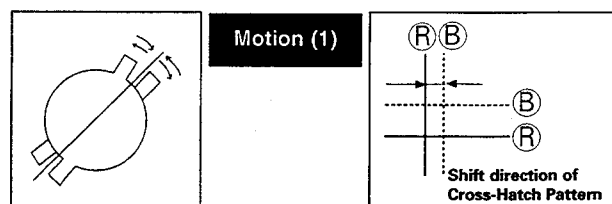


Figure 6-6. Vertical Direction

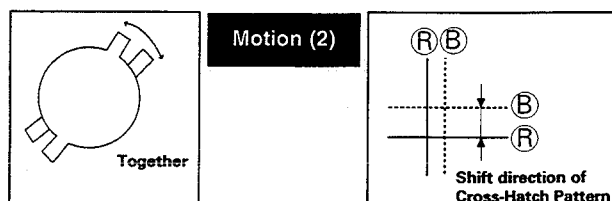


Figure 6-7. Horizontal Direction

### 6-10-2 Alignment of Red, Blue and Green with the 6-pole magnet

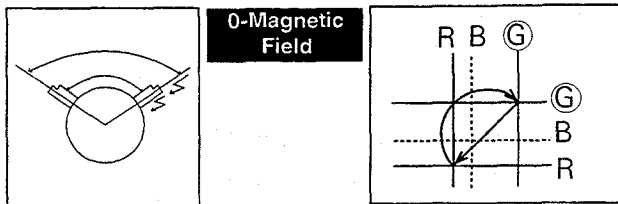


Figure 6-8. Movable in Spread Condition

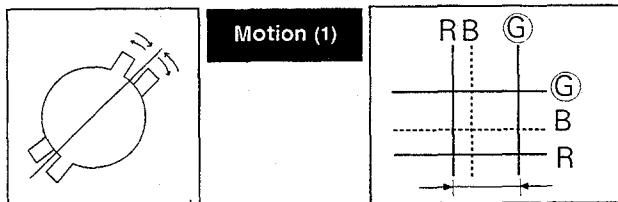


Figure 6-9. Vertical Direction

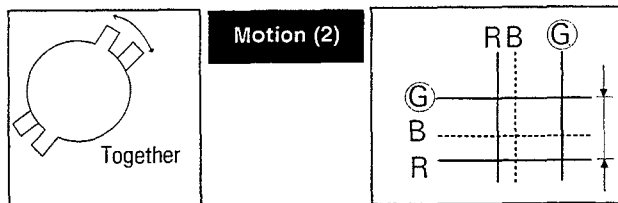


Figure 6-10. Horizontal Direction

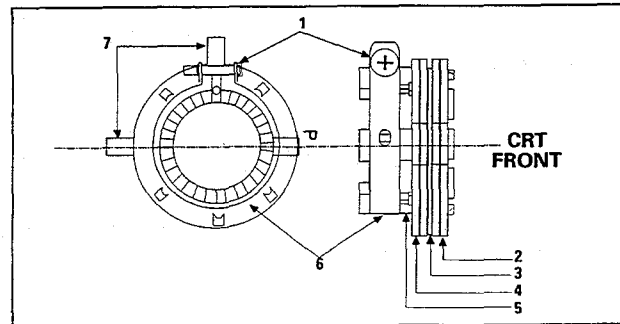


Figure 6-11. Phillips Magnet Configuration

PHILIPS CRT			
1 Setup Bolt	2 4-Pole Magnet	3 Spacer	4 6-Pole Magnet
5 Holder	6 Band	7 Tabs	

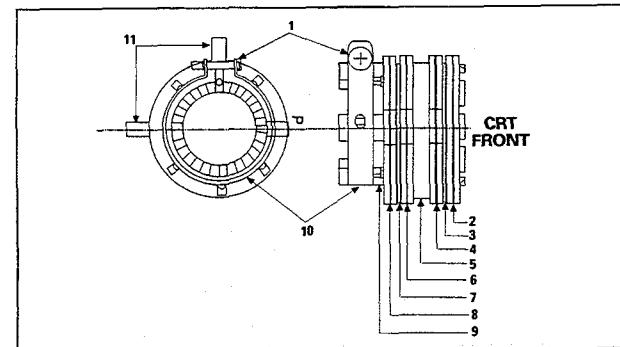


Figure 6-12. Toshiba Magnet Configuration

TOSHIBA CRT			
1 Setup Bolt	2 Bow Magnet	3 Spacer	4 2-Pole Magnet
5 Band	6 6-Pole Magnet	7 Spacer	8 4-Pole Magnet
9 Holder	10 Band	11 Tabs	

## 6-11 Dynamic (Edge) Convergence

Use the following procedure to correct minor dynamic (edge) misconvergence. If, after using this procedure, dynamic misconvergence is still greater than the 0.4 mm tolerance (around the periphery of the display area), replace the CRT.

1. Make sure the display is not affected by external magnetic fields.
2. Make sure the static convergence is properly adjusted.
3. Strategically place small magnetic strips on the back of the CRT to correct the misconvergence. Be careful not to remove the paper protecting the adhesive on the magnetic strip until you are satisfied with their placement and the dynamic convergence.
4. When you are satisfied with the convergence around the edge of the CRT, permanently glue the magnets to the back of the CRT.

Table 6-5. Magnetic Strips

Description	Size	Code Number
Magnet Sheet	5 mm x 80 mm	937 319004CA
Magnet Sheet	10 mm x 80 mm	937 319004AA

### Warning



Do not remove the factory installed wedges. These wedges were installed by the CRT manufacturer and are properly placed for this CRT. Removal may result in damage to the CRT.

## **Memo**

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## 7 Display Performance

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This section of the service manual describes the parameters for optimum screen quality.

### 7-1 Display Area

---

The display area is the entire area available to display an image. It spans from one edge of the CRT screen to the other edge.

Width :  $250 \pm 3$  mm (5:4 Format),  $267 \pm 3$  mm (4:3 Format).

Height:  $200 \pm 3$  mm.

### 7-2 Centering

---

Centering means to position the center point of the display in the middle of the display area. Horizontal size and position and vertical size and position control the centering of the display.

Adjust the horizontal size and vertical size to their optimal settings: 267 mm (H) x 200 mm (V)

Adjust the horizontal position and vertical position to  $\leq 4.0$  mm of the center point of the screen.

$|A - B| \leq 4.0$  mm.

$|C - D| \leq 4.0$  mm.

### 7-3 Distortion

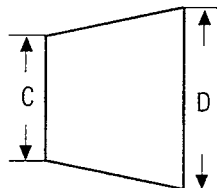
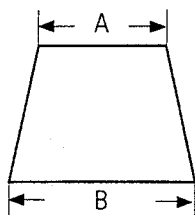
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Distortion refers to the geometric shape of the display. The corner angles of the display should be 90 degrees. Adjust the trapezoid, parallelogram and pincushion distortions to below the maximum tolerances.

#### 7-3-1 Trapezoid

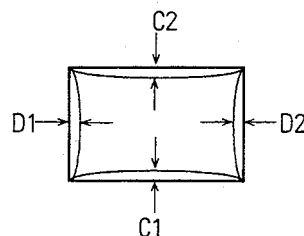
$|A - B| < 2.0$  mm

$|C - D| < 2.0$  mm

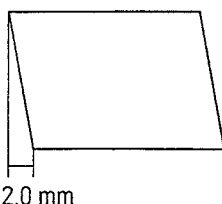


#### 7-3-3 Pincushion

$|C1|, |C2| \leq 2.0$  mm,  
 $|D1|, |D2| \leq 2.0$  mm.



#### 7-3-2 Parallelogram



## 7-4 Linearity

Linearity affects the symmetry of images displaying on the screen. Unless each row or column of blocks in a crosshatch pattern is of equal size, or within the tolerances shown in Table 7-1 and 7-2 an image appears distorted, elongated or squashed.

To adjust the linearity to its optimum setting, apply one of the formulas below, or refer to the table.

### 7-4-1 Conditions

Display image: Crosshatch pattern with 16 blocks horizontally and 12 blocks vertically. Maximum and minimum values should not be adjacent to each other.

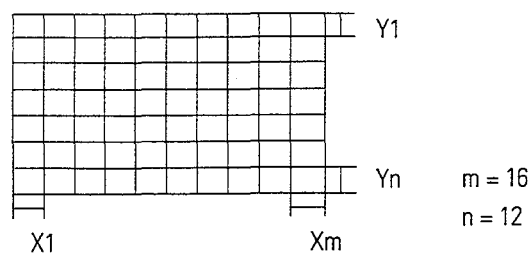


Table 7-1. Standard Mode Linearity: 37.5 kHz/75Hz, 46.875 kHz/75 Hz

Standard Mode	Factory Preset Timing Modes	
	Each block (5%)	Difference between adjacent blocks (4%)
640x480/75 Hz 800x600/75 Hz 1024x768/75 Hz	Horizontal: 15.9 ~ 17.5 Vertical : 15.8 ~ 17.5	Horizontal: Less than 0.7 mm Vertical : Less than 0.7 mm

Table 7-2. Other Modes Linearity: VGA, 8514/A, XGA, MAC, etc.

Screen Ratio	Supported Timing Modes	
	Each block (7%)	Difference between adjacent blocks (5%)
4 : 3	Horizontal : 15.5~ 17.9 Vertical : 15.5 ~ 17.8	Horizontal: less than 0.8 mm Vertical : less than 0.8 mm
5 : 4	Horizontal : 14.5~ 16.7 Vertical : 15.5 ~ 17.8	Horizontal: less than 0.8 mm Vertical : less than 0.8 mm

## 7-5 Luminance Uniformity

Luminance uniformity means that the luminance at the position of the lowest brightness must be more than 70% of the luminance at the area with the highest brightness. Luminance is considered uniform only if the ratio of lowest to highest brightness does not exceed 7:10.

Table 7-3. Computing Luminance Uniformity

Value	70 % (Min) Variation = $\frac{A}{C} \times 100$
Conditions	Display Image : White flat field. Luminance : Brightness cut off, Contrast Max.  A : Luminance at position of highest brightness. C : Luminance at position of lowest brightness.

## 7-6 Color Coordinates (Temperature)

Color temperature is a measure of the radiant energy transmitted by a color. For computer monitors, the color temperature refers to the radiant energy transmitted by white. Color coordinates are the X and Y coordinates on the chromaticity diagram of wavelengths for the visible spectrum.

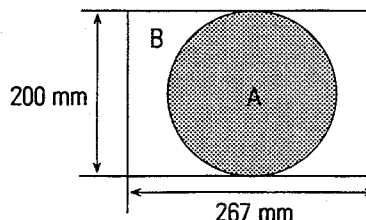
Table 7-4. Color Coordinates

Value	9300° K : $x = 0.283 \pm 0.02$ , $y = 0.298 \pm 0.02$ . 6500° K : $x = 0.313 \pm 0.02$ , $y = 0.329 \pm 0.02$ .
Conditions	Display Image : White flat field at the center of display area. Luminance : Min : 5 FL, Max : 24 FL.

## 7-7 Misconvergence

Misconvergence occurs when one or more of the electron beams in a multi beam CRT fail to meet the other beams at a specified point, such as at an opening in the shadow mask.

Center area of display : (A) < 0.3 mm  
Peripheral area of display : (B) < 0.4 mm



### Conditions

Display Image: Crosshatch pattern mixed with R,G,B colors.

## 7-8 Color Purity

Color purity is the absence of undesired color. Conspicuous mislanding (unexpected color in a uniform field) within the display area shall not be visible at a distance of 50 cm from CRT surface.

### Conditions

Display image: White flat field.  
Luminance : 15 ft-L at the center of display area.

## Memo



## 8 List of Abbreviations and Acronyms

The list of abbreviations is described in the table below.

### 8-1 Abbreviations

Table 8-1. Abbreviations

Abbv	Definition	Abbv	Definition
amp	amplifier	pcb	printed circuit board
amps	amperes	pF	picofarad
ass'y	assembly	pip	picture-in-picture
bps	bits per second	pix	picture
cm	centimeter(s)	pos	positive or position
con	connector	pot	potential
dy	deflection yoke	pwr	power
ft-L	foot Lamberts	qty	quantity
hor	horizontal	sw	switch
in	inch(es)	sync	synchronous or synchronization
lb	pound(s)	tach	tachometer
lin	linearity	μF	microfarad
mm	millimeter(s)	vert	vertical
mpx	multiplex	Vp-p	voltage peak-to-peak
neg	negative	VR	variable resistor
osc	oscillator		
pba	printed board assembly		

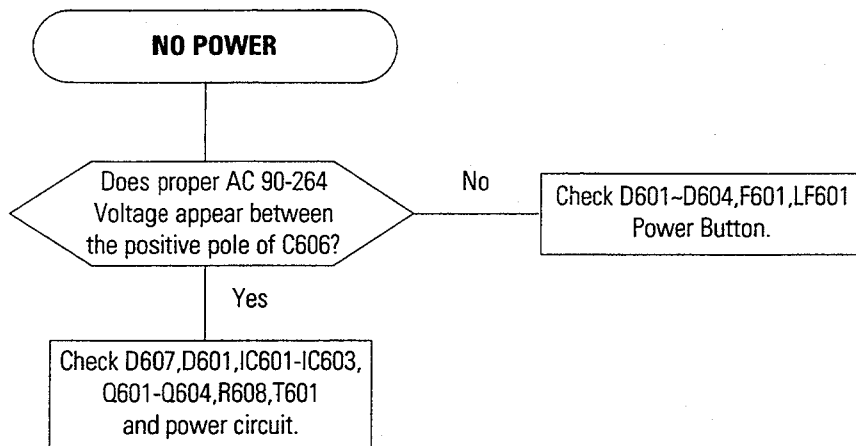
## 8-2 Acronyms

Table 8-2. Acronyms

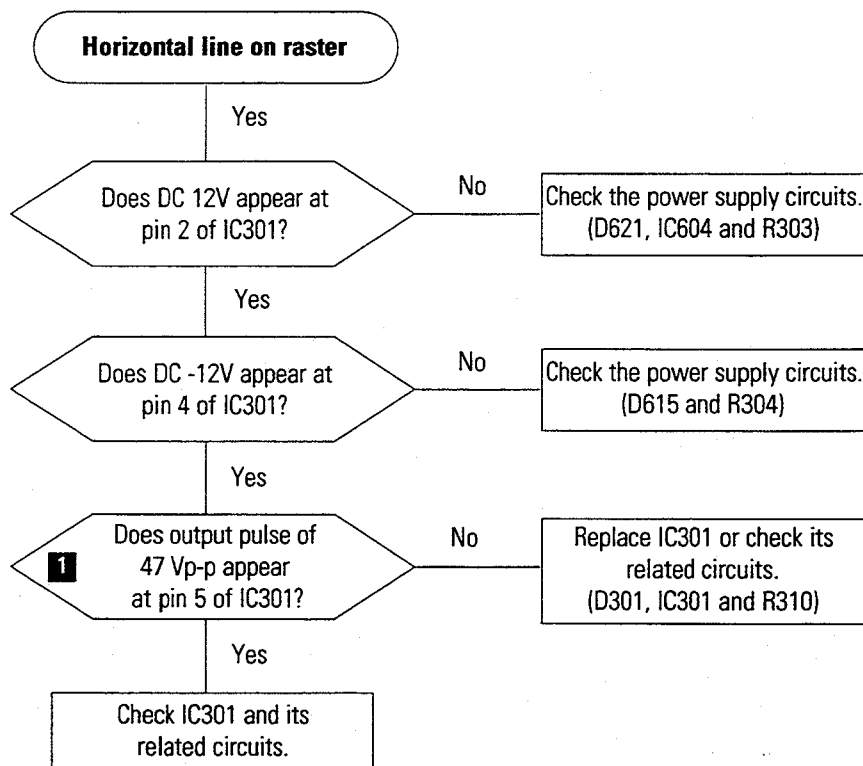
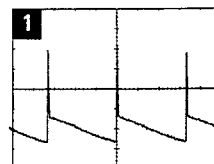
Acronym	Definition	Acronym	Definition
ABL	Automatic Brightness Limit	MOSFET	Metal-oxide Semiconductor FET
AC	Alternating Current	MTBF	Mean Time Between Failures
ACL	Automatic Contrast Limit	OSC	Oscillator
ADC	Analog to Digital Converter	OSD	On Screen Display
AMP	Amplifier	PCM	Purity Convergence Magnet
CAD	Computer Aided Design	PIO	Parallel Input Output
CAM	Computer Aided Manufacturing	PLL	Phase-Locked Loop
CPU	Central Processing Unit	PWM	Pulse-Width Modulator
CRT	Cathode Ray Tube	RMS	Root-Mean-Square
CSA	Canadian Standards Association	SW	Switch
DAC	Digital to Analog Converter	SYNC	Synchronization
DCC	Direct Communication Channel	TTL	Transistor-Transistor Logic
DDC	Display Data Channel	UL	Underwriters Laboratory
DPMS	Display Power Management Signaling	VAGI	VESA Advanced Graphics Interface
DVM	Digital Voltmeter	VBE/PM	VESA BIOS Extension Commission/Power Management
DY	Deflection Yoke	VDE	Verband Deutscher Elektrotechniker
EEPROM	Electrically Erasable Programmable Read-Only Memory	VESA	Video Electronics Standards Association
EMI	Electro Magnetic Interference	VGA	Video Graphics Array
EPROM	Erasable Programmable Read-Only Memory	VOM	Volt-Ohm-Milliammeter
ESD	Electrostatic Discharge	VR	Variable Resistor
FBT	Flyback Transformer	Vp-p	Voltage peak-to-peak
FCC	Federal Communications Commission		
FET	Field-Effect Transistor		
IC	Integrated Circuit		
LCD	Liquid Crystal Display		
LIN	Linearity		
LED	Light Emitting Diode		

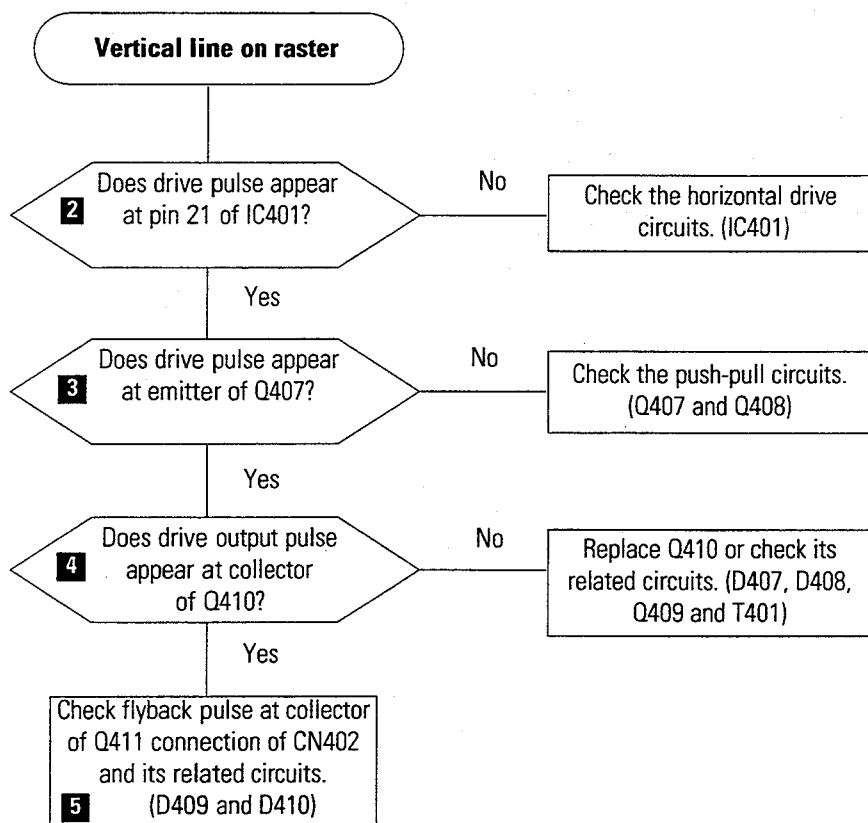
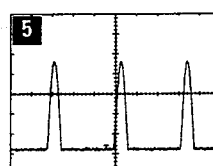
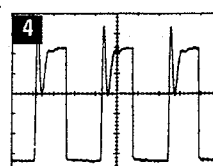
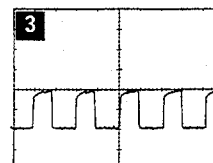
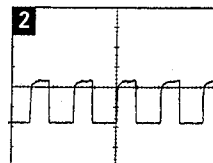
## 9 Troubleshooting

- Notes:**
1. If picture does not appear, fully rotate the brightness and contrast controls clockwise before inspection.
  2. Check the following circuits:
    - No raster appears: Power circuit, horizontal output circuit, H/V control circuit and H/V out-put circuit.
    - High voltage develops but no raster appears: Video output circuits.
    - High voltage does not develop: Horizontal output circuits.

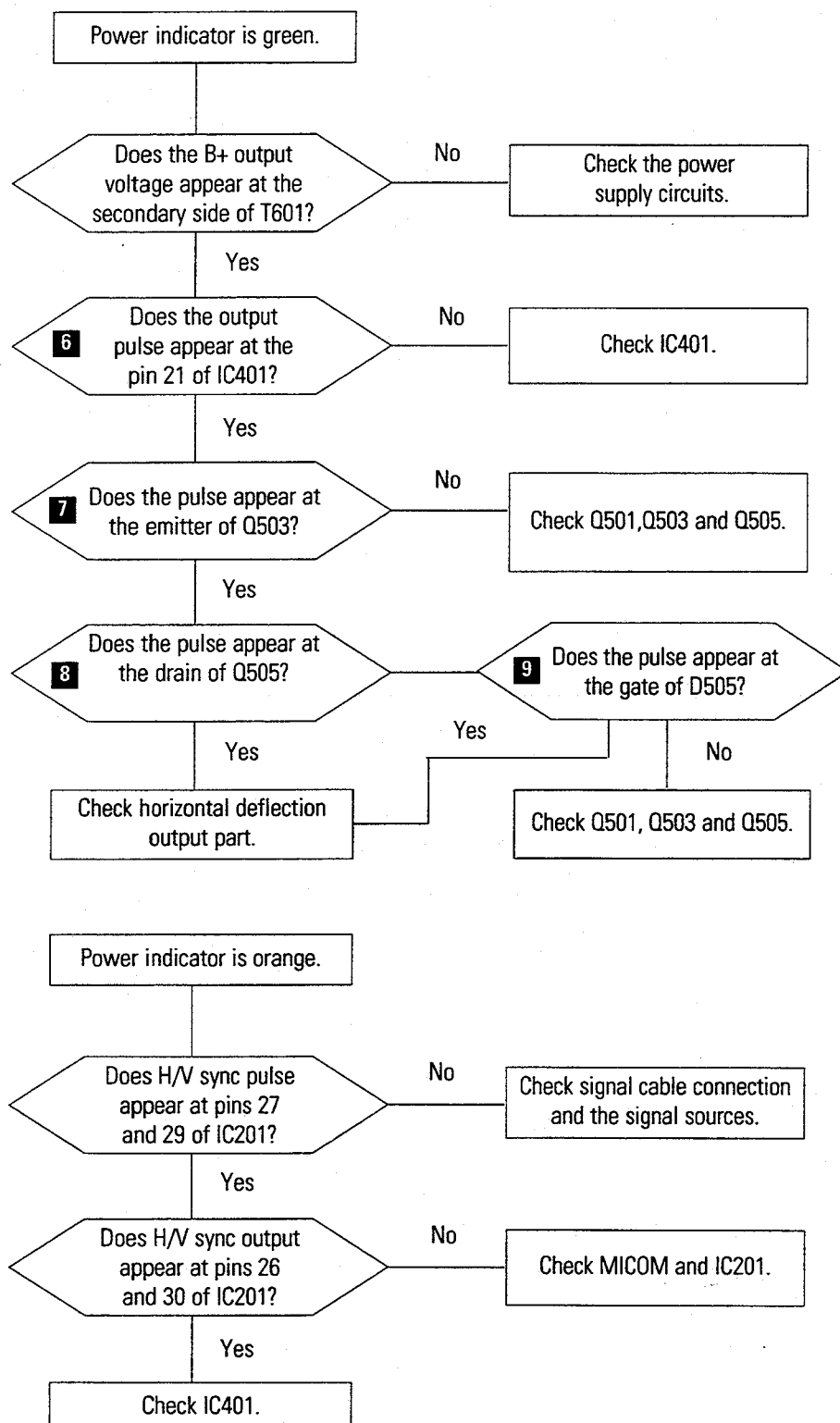


### WAVE FORMS

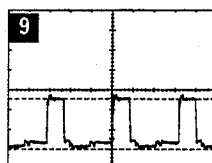
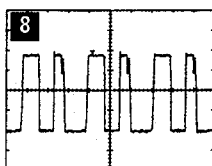
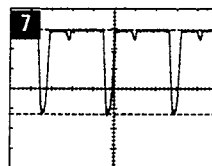
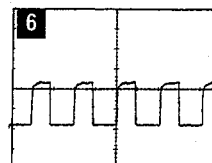


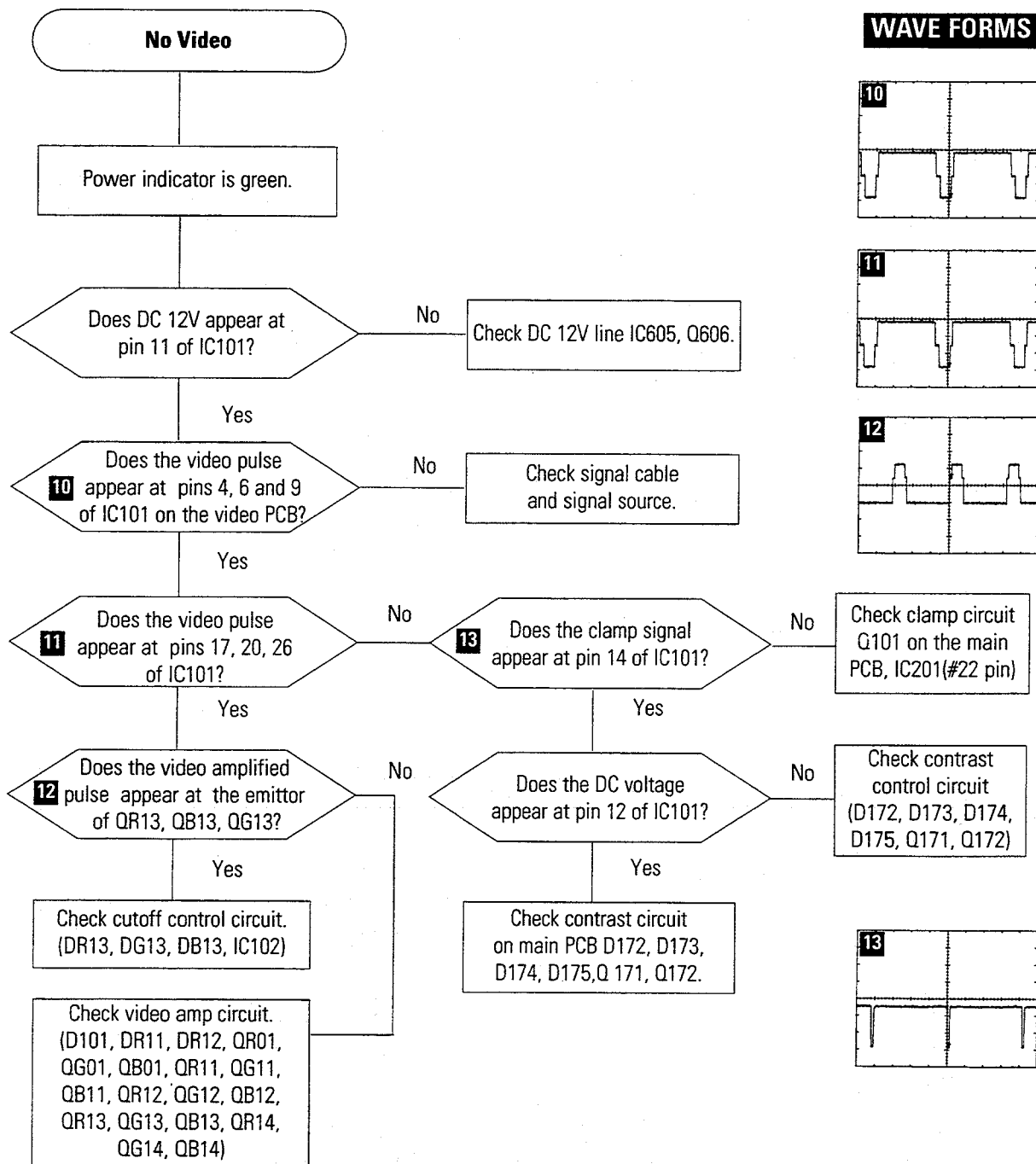
**WAVE FORMS**

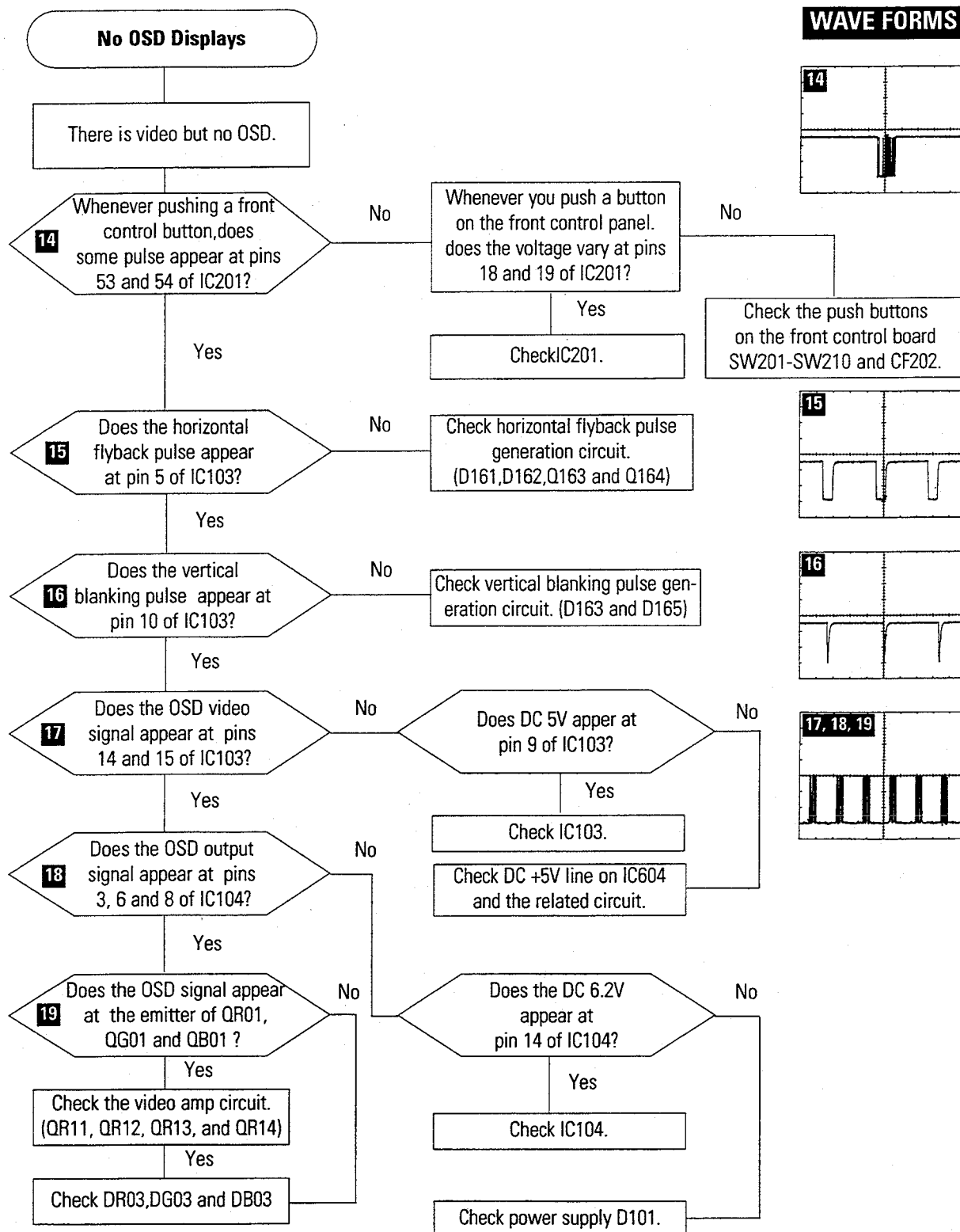
## No raster

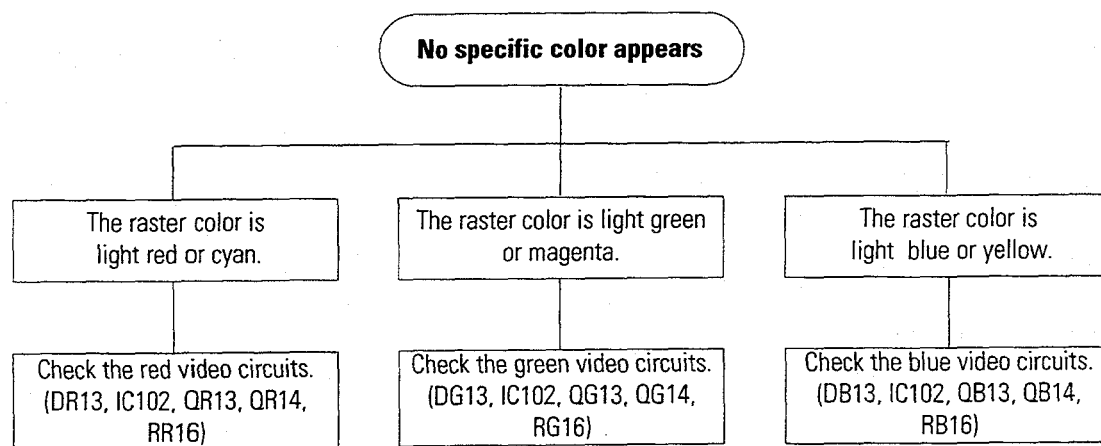


## WAVE FORMS

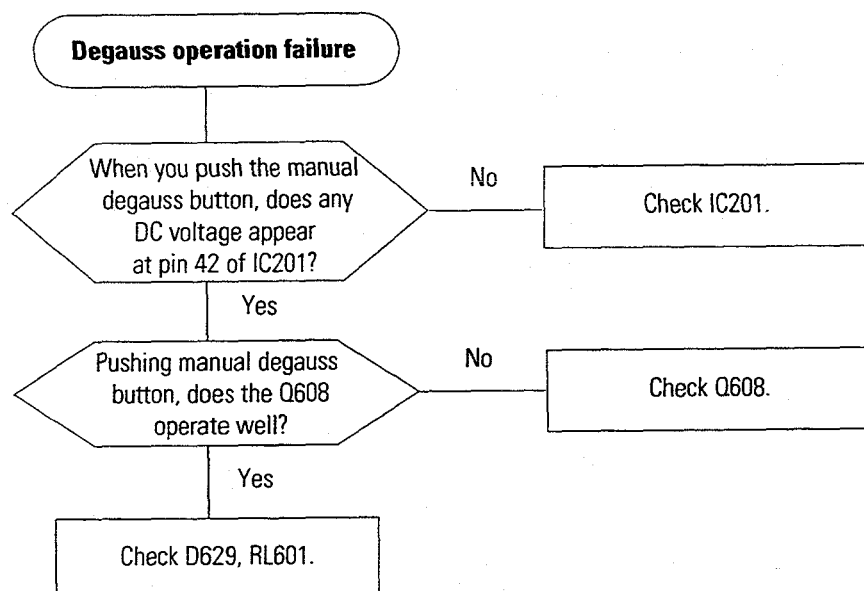








**Note:** Removing the signal cable displays a self raster screen. This screen displays the message "check signal cable" along with red, green and blue boxes. Use these boxes to check whether each individual color (R, G, B) is operating or not.





## Power save management system failure

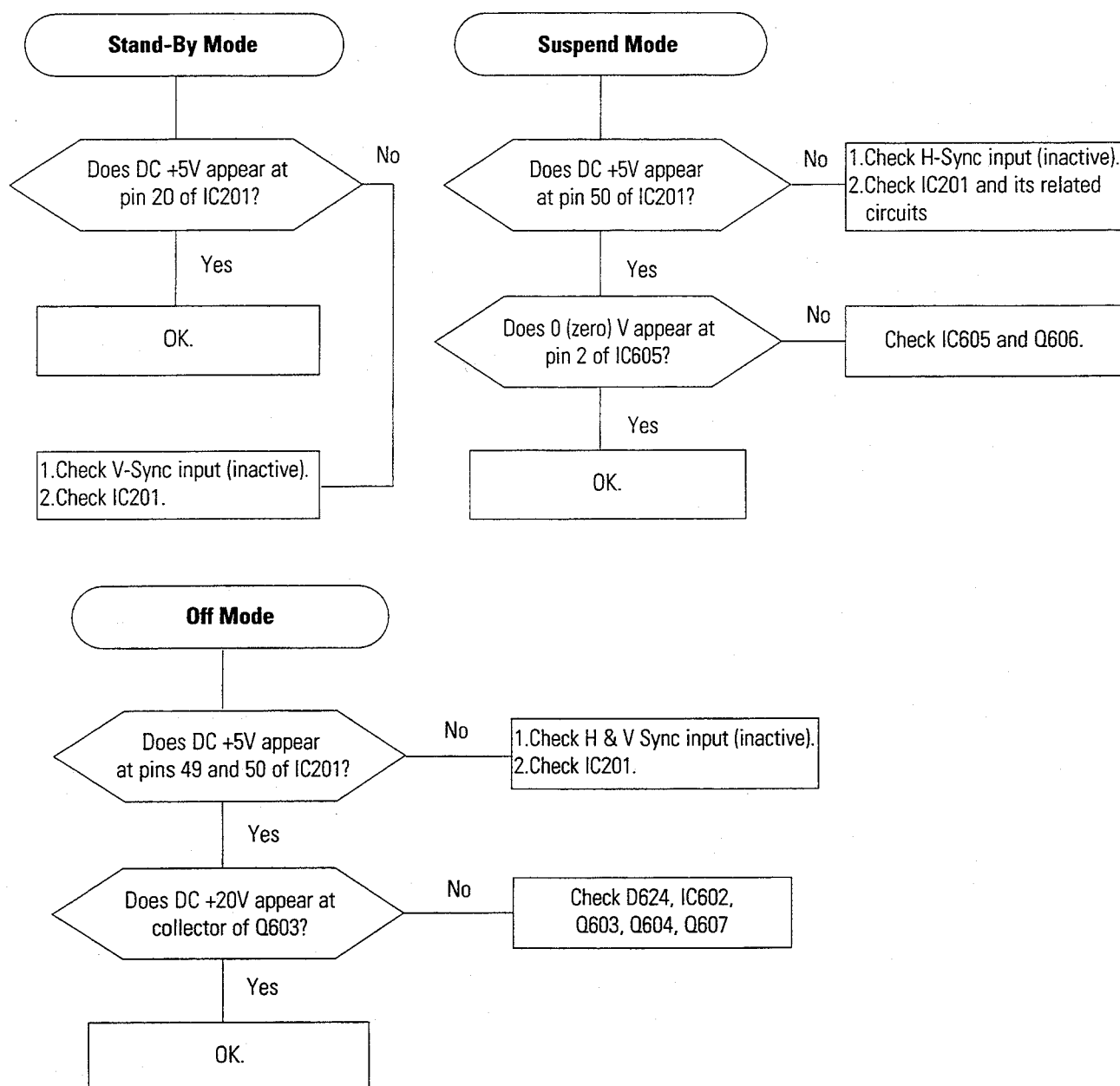


Table 9-2. DPMS Logic Table

Mode	SYNC		Video	LED Color
	H	V		
Normal	Active	Active	Active	Green
Stand-By	Inactive	Active	Blanked	Orange
Suspend	Active	Inactive	Blanked	Orange/Green blanking
Off	Inactive	Inactive	Blanked	Orange blanking

**Note:** If signal cable is removed, DPMS function does not operate and a self raster is displayed.

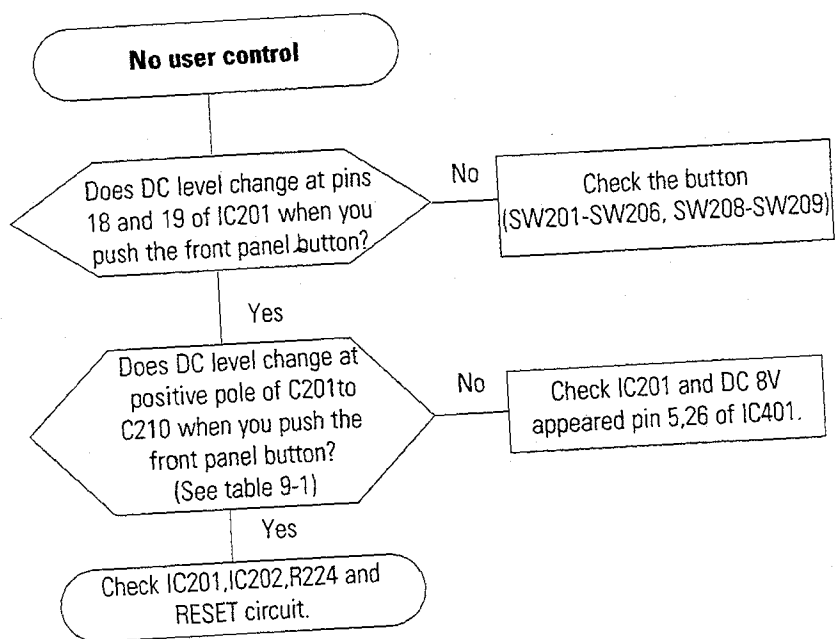






















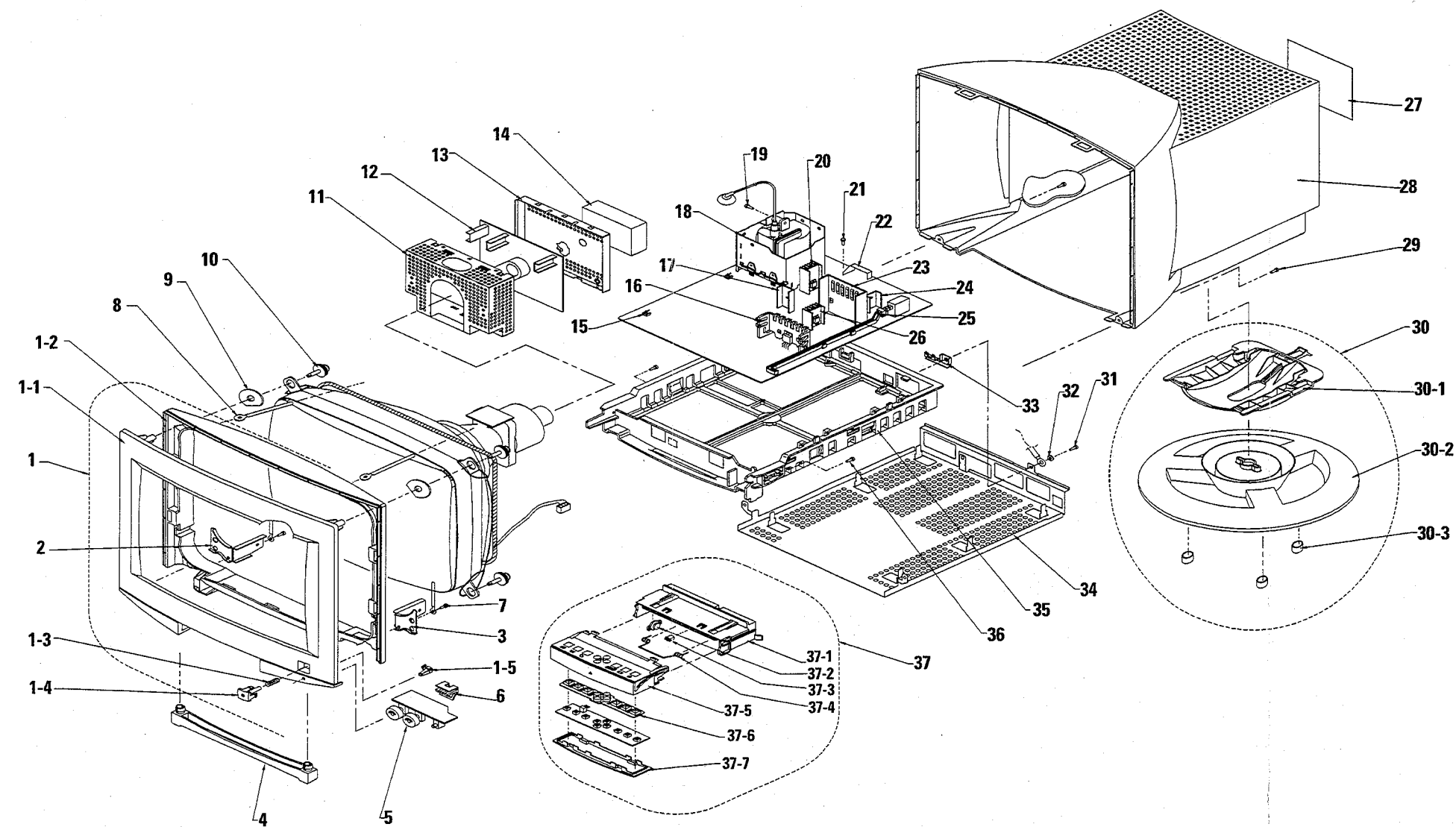
Table 9-1. Front Panel Button

Location	Function
C201	Pin Balance
C202	Vertical Linerity
C203	Horizontal Size
C204	Vertical Size
C205	Horizontal Position
C206	Vertical Position
C208	Side Pincushion
C209	Trapezoid
C210	Parallelogram

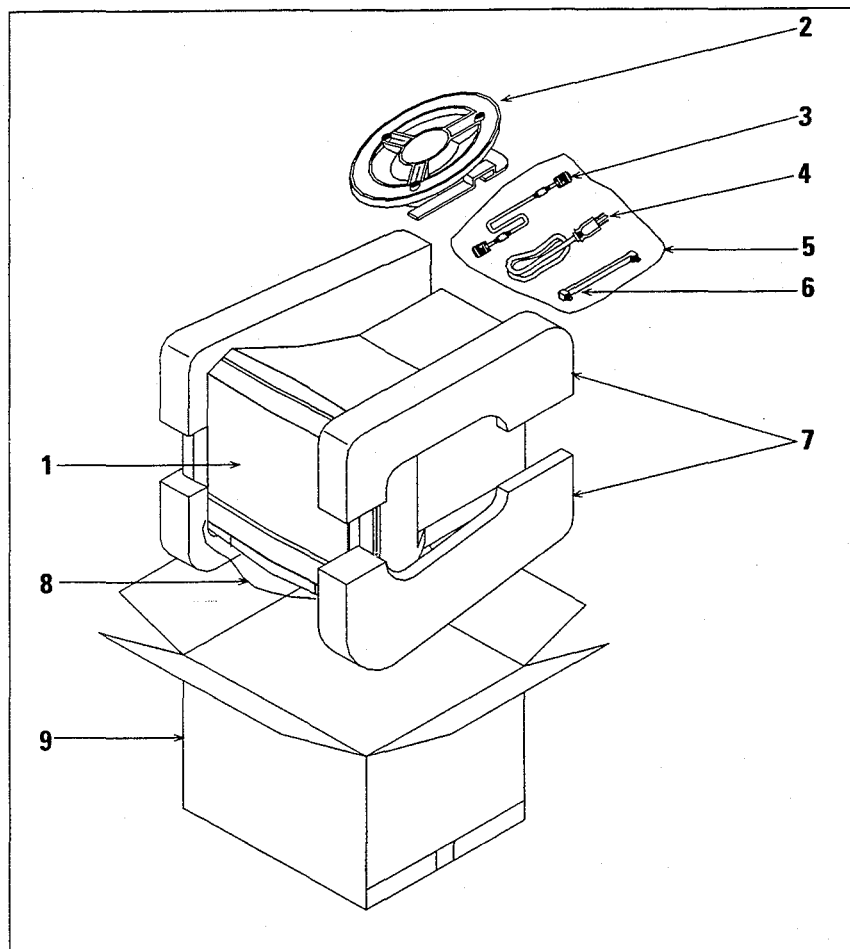
( : Caution,  : Specialty part for this monitor only,  : ESD Caution)

No.	Description	Code No.	Specification	Q'TY	Remarks
1	COVER-FRONT ASS'Y	811 468024AA	ABS VE-0812 C7262	1	 
1-1	COVER-FRONT	821 460352AA	ABS VE-0812 C7262	1	
1-2	BRND COLOR	821 468264AA	ABS VE-0812 75064	1	
1-3	SPRING-COIL	831 522033AJ	SUS304 WPA PI0.5	1	
1-4	KNOB-POWER	821 469113AA	ABS VE-0812 C7262	1	
1-5	LENS-LED	821 468268AA	ACRYL	1	
2	BRACKET-CRT LEFT	813 460289AA	SECC-1 T1.2	1	
3	BRACKET-CRT RIGHT	813 460288AA	SECC-1 T1.2	1	
4	SUPPORT-BOTTOM	821 468282AA	ABS VE-0812 C7262	1	
5	KNOB-VR	831 171050AA	ABS VE-0812 C7262	2	
6	HOLDER-PCB	821 468283AA	NYLON 6/6	1	
7	SCREW-TAPTITE	847 501007FC	BH+,M4,L16 ZPC3	2	
8	CLAMP-DEGAUSSING	857 170033BD	SECC T0.5/PVC	4	
9	WASHER-PLAIN	855 170052AD	RUBBER HB,BLK,T1.0	2	
10	SCREW-CRT,TAPTITE	847 502004BB	BH+,M5,L30 ZPC3	4	
11	SHIELD-VIDEO	813 464217AA	SPTT T0.3	1	
12	HEATSINK-TR	831 513021AA	SPC T1.0 SN	3	
13	SH/CAP-ASS'Y	811 466033AA	SPTT T0.3	1	
14	SPONGE-VIDEO	831 312009AB	CR BLK 79X50X25T	1	
15	CLIP-GND	815 462025AA	PBS1,3/4H	6	
16	HEATSINK-V.IC	831 513022AA	A1050S H14 T3.0	1	
17	HEATSINK-POWER	831 513023AA	SPC T1.0 SN	1	
18	HEATSINK-FBT	831 514509BA	A1050S H14 T1.0	1	
19	SCREW-TAPTITE	847 501007FC	BH+,M4,L16 ZPC3	1	
20	HEATSINK-TR	831 511012AH	A6063S EXTRA H50	1	
21	SCREW-TAPTITE	847 501007FB	BH+,M4,L12 ZPC3	1	
22	SHIELD-D.SUB	813 464193AA	SPTT T0.5	1	
23	HEATSINK-POWER	831 513523EA	A1050S H14 T1.8	1	
24	HEATSINK-TR	831 513021AA	SPC T1.0 SN	1	
25	SHAFT-POWER	821 468265AA	ABS VE-0812 C7262	1	
26	HEATSINK-TR	831 511012AC	A6063S EXTRA H13	1	
27	LABEL-RATING	825 139490CD	PE T0.075	1	
28	COVER-REAR	847 501007FC	ABS VE-0812 C7262	1	
29	SCREW-TAPTITE	811 460049AA	BH+,M4,L16 ZPC3	2	
30	STAND-ASS'Y	821 463099AA	ABS VE-0812 C7262	1	
30-1	STAND-TOP	821 463100AA	ABS VE-0812 C7262	1	
30-2	STAND-BASE	831 313024AB	ABS VE-0812 C7262	1	
30-3	RUBBER-FOOT	831 313024AB	NEOPRENE V1 BGE	3	
31	SCREW-TAPTITE	847 501007FA	BH+,M4,L10 ZPC3	1	
32	WASHER-SPRING	855 124001BB	M4,ID4,1,OD7.6,T1	1	
33	BRKT-AC GND	813 464210AA	SECC T1.0	1	
34	SHIELD-BOTTOM	813 464213AA	SPTT T0.3	1	
35	FRAME-PCB	821 466016AA	ABS VE-0812 C7262	1	
36	SCREW-TAPTITE	847 501007FC	BH+,M4,L16 ZPC3	2	
37	BOX-CONTROL-ASS'Y	811 467002AB	ABS VE-0812 C7262	1	
37-1	HOUSING-CONTROL	821 468272AB	PC/ABS 2950HF	1	
37-2	GEAR-DAMPER	821 468281AB	KIFCO DP801 20g.Cm	1	
37-3	DOOR-PUSH S/W	831 562003AA	LA701	1	
37-4	SPRING-CONTROL	831 523053AA	SUS304 WPA PI0.8	1	
37-5	BOX-CONTROL	821 468266AA	ABS VE-0812 C7262	1	
37-6	RUBBER-FUNCTION	821 468270AA	SILICON RUBBER	1	
37-7	PANEL-CONTROL	821 468267AA	ABS VE-0812 C7262	1	

10 Exploded View and Parts List



## 11 Packing Diagram and Parts List

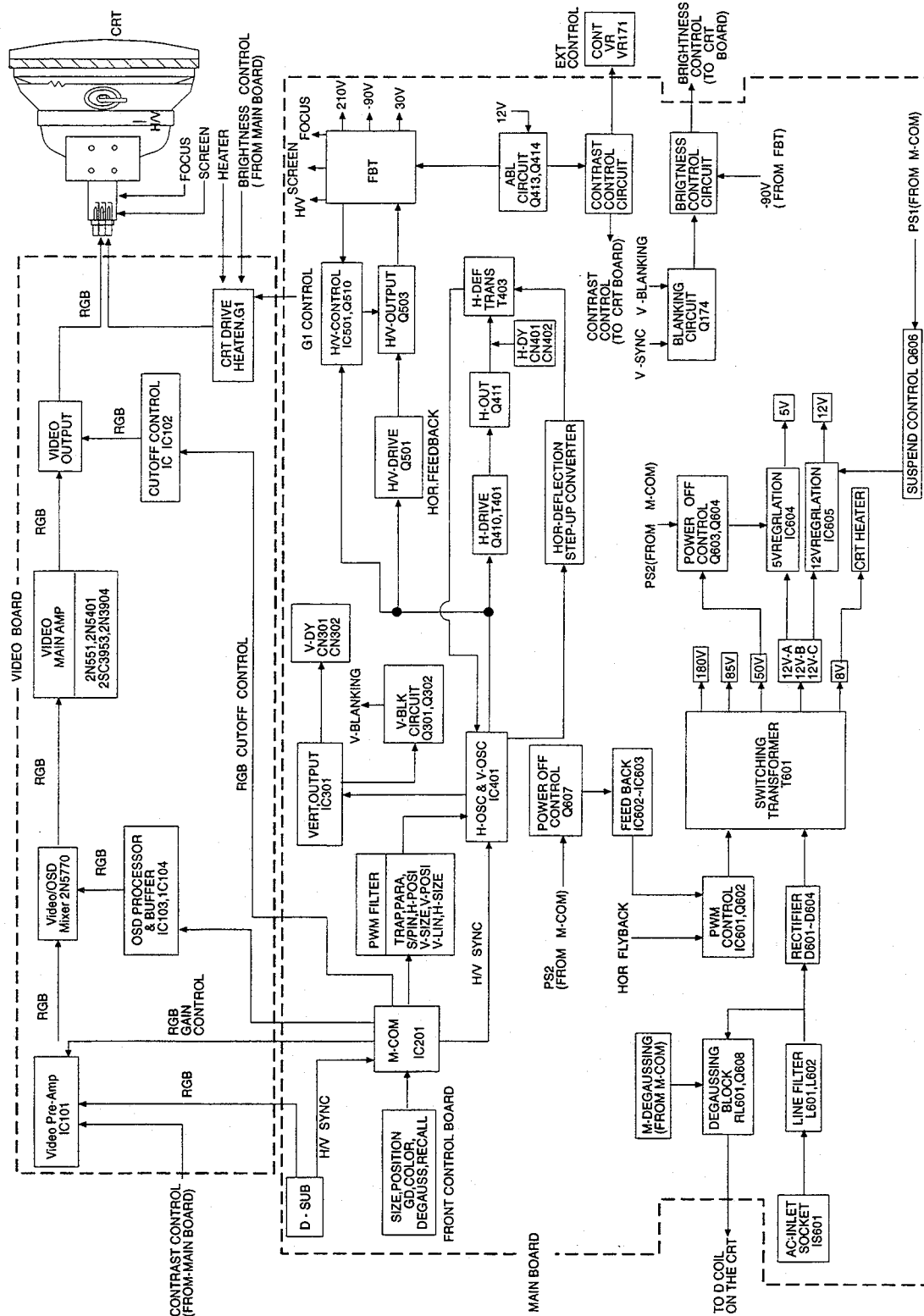


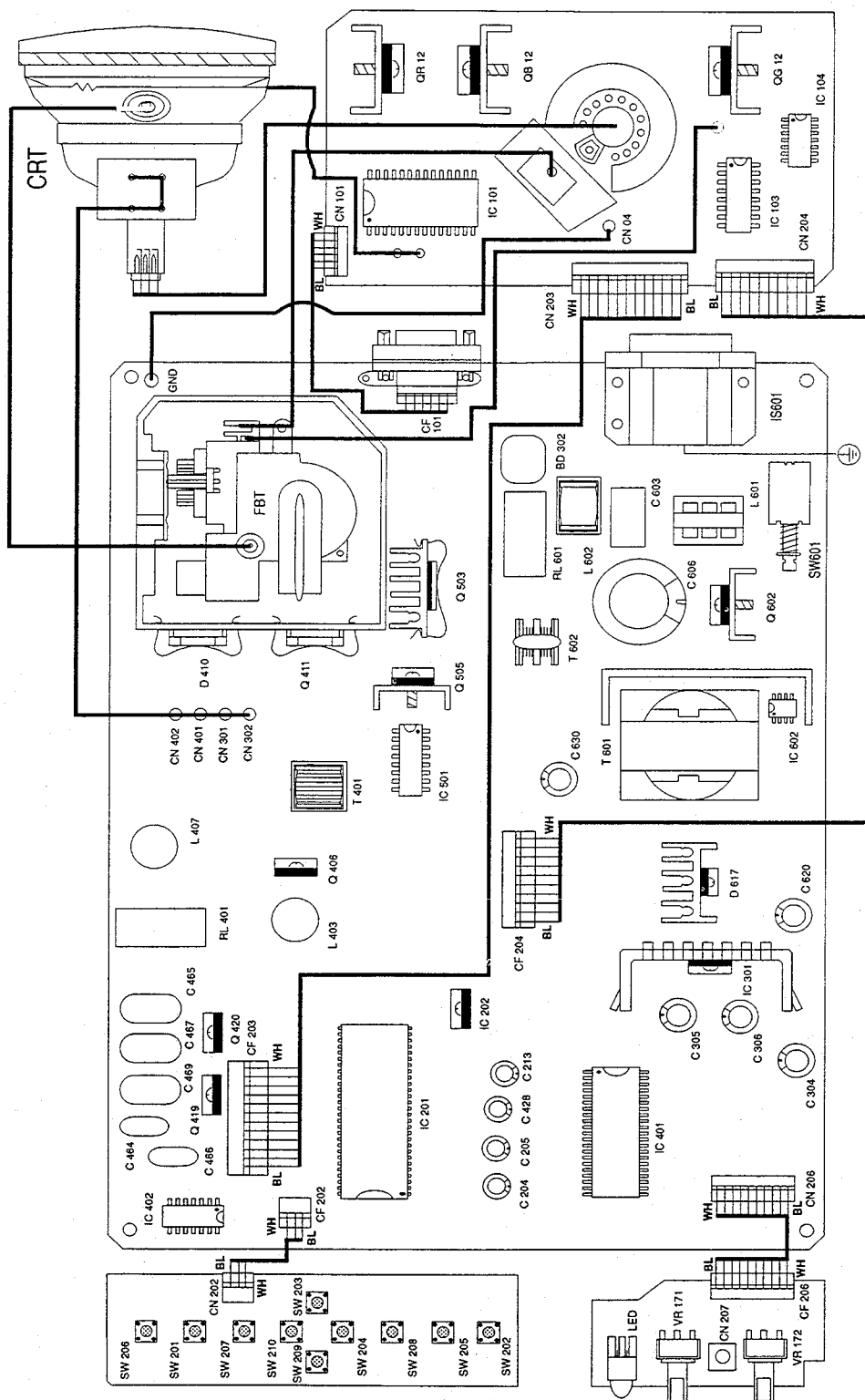
No	Description	Q'TY	Remark
1	MONITOR UNIT	1	
2	STAND-ASS'Y	1	
3	SIGNAL CABLE	1	
4	POWER CORD	1	
5	PE-BAG	1	
6	SUPPORT-BOTTOM	1	
7	CUSHION	4	
8	PE-BAG	1	
9	BOX	1	

## Memo

## 12 Service Diagrams

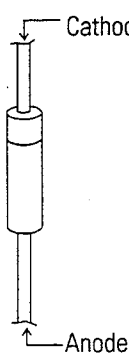

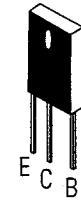
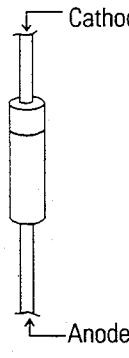


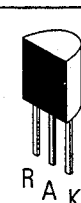
### 12-1 Block Diagram







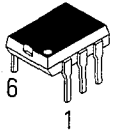

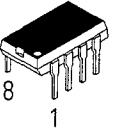

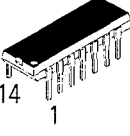

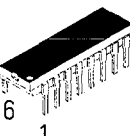

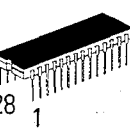

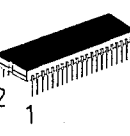

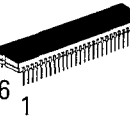



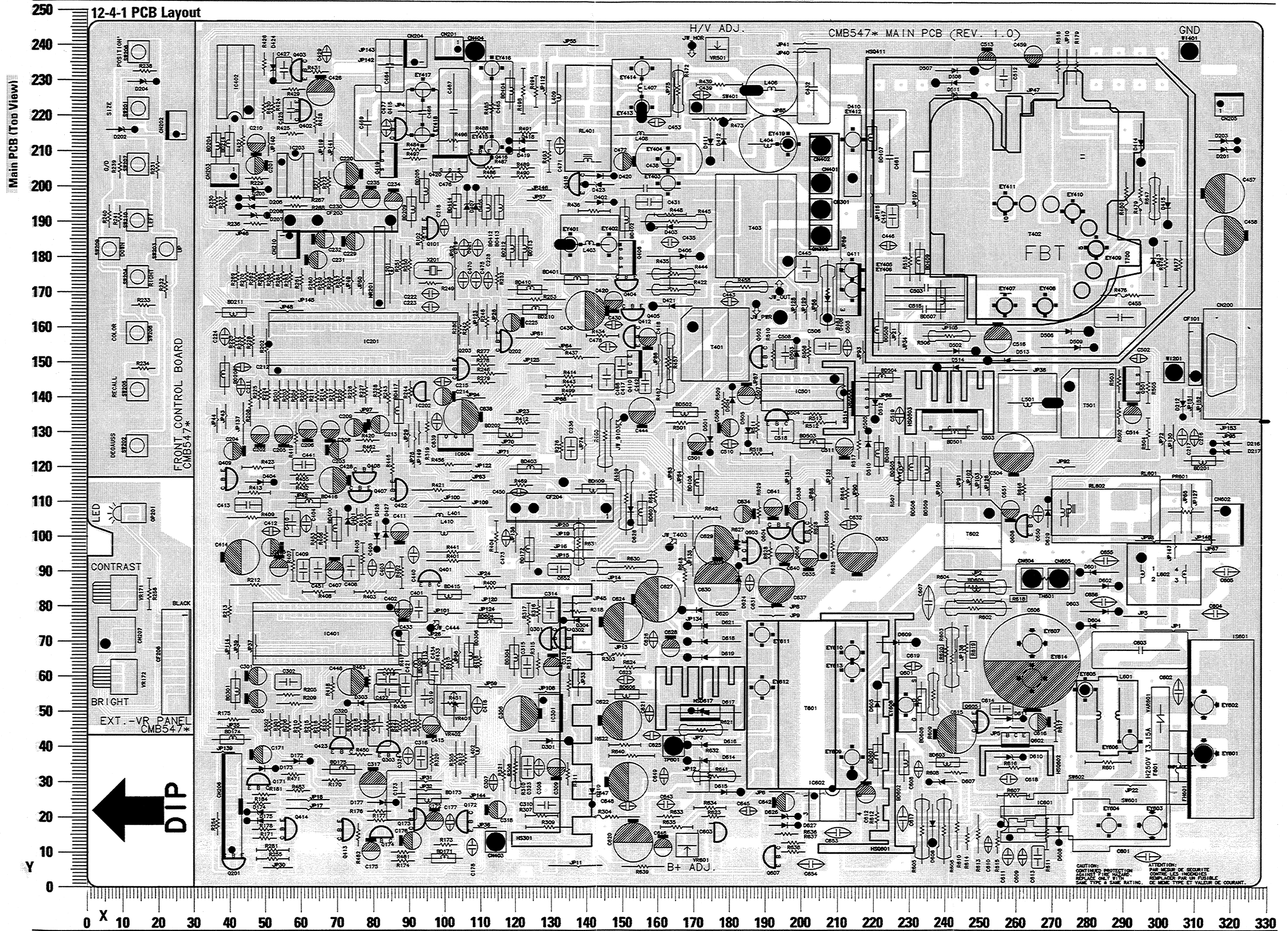


## 12-3 Semiconductor Lead Identification

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	1N4148	D161, D162, D163, D172, D173, D175, D205, D207, D210, D302, D303, D304, D402, D404, D418, D419, D420, D426, D427, D501, D503, D504, D505, D510, D608, D611, D627, D628, D629, DB01, DB02, DB03, DB11, DB12, DR01, DR02, DR03, DR11, DR12, DG01, DG02, DG03, DG11, DG12		KSC945-Y	Q175, Q201, Q401, Q402, Q403, Q404, Q409, Q412, Q415, Q416, Q418, Q606, Q607
	BAV21	D177, D209, D624, DR13, DG13, DB13		KSA733-Y	Q171, Q172, Q405, Q504
	2.7V ZENER	D174, D423		MPS3646	Q162
	5.1 V ZENER	D201, D202, D203, D204, D206, D208, D212, D216, D217		KSC1008	Q174, Q301, Q302, Q604, Q608
	6.2V ZENER	D101		2N3904	Q101, Q161, Q164, Q165, Q407, Q413, Q414, QR11, QG11, QB11
	8.2 V ZENER	D102		2N3906	Q163, Q408
	12 V ZENER	D401, D626		2N5401	QR14, QG14, QB14
	16 V ZENER	D610		2N5551	QR13, QG13, QB13
	24 V ZENER	D607		2N5770	QB01, QG01, QR01
				KC3503	Q410, Q602
				KSC3953	QB12, QG12, QR12
	RGP02-12	D403, D605, D609		KSA614	Q413
	1N4002	D408, D507, D508			
	1N4007	D103, D104		IRF610	Q501
	1N4937	D405, D601-D606		IRF620	Q406
	RGP10G	D301, D411-D415, D421		IRF640	Q419, Q420
	1R5GU41	D406, D512, D615, D618, D619, D620, D621		IRF644	Q505
	RG2Y	D621		KA431	IC603
	1R5NU41	D614, D616			
	UF5404	D506			
	1N5399GP	D601, D602, D603, D604			

## 12-3 Semiconductor Lead Identification

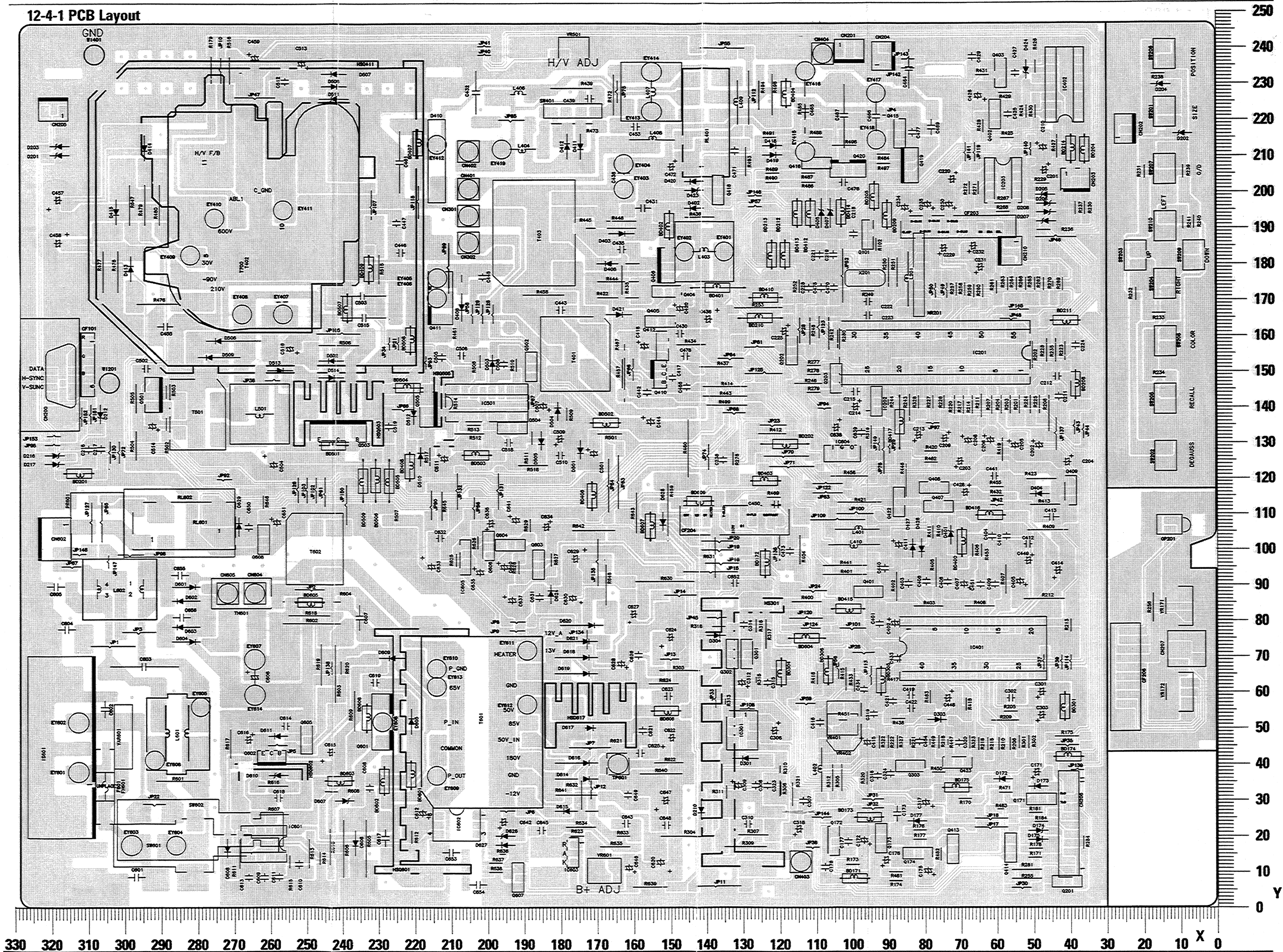
PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	KSA1013	Q603		TDA8172	IC301
	MC7805	IC604		KIA7045P	IC202
	CQY80NG	IC602		2SC3886A 2SC5149	Q411 Q503
	KA3882	IC601		5THZ52	D410
	KA324	IC402		2SK2038	Q601
	DLAB494	IC501		FMG-G26S	D617
	LM1207	IC101		KA78R12	IC605
	TDA9103	IC401		CGJ-1	D509
	ST7271A	IC201		HYBRID-IC (CUTOFF-CONTROL)	IC102





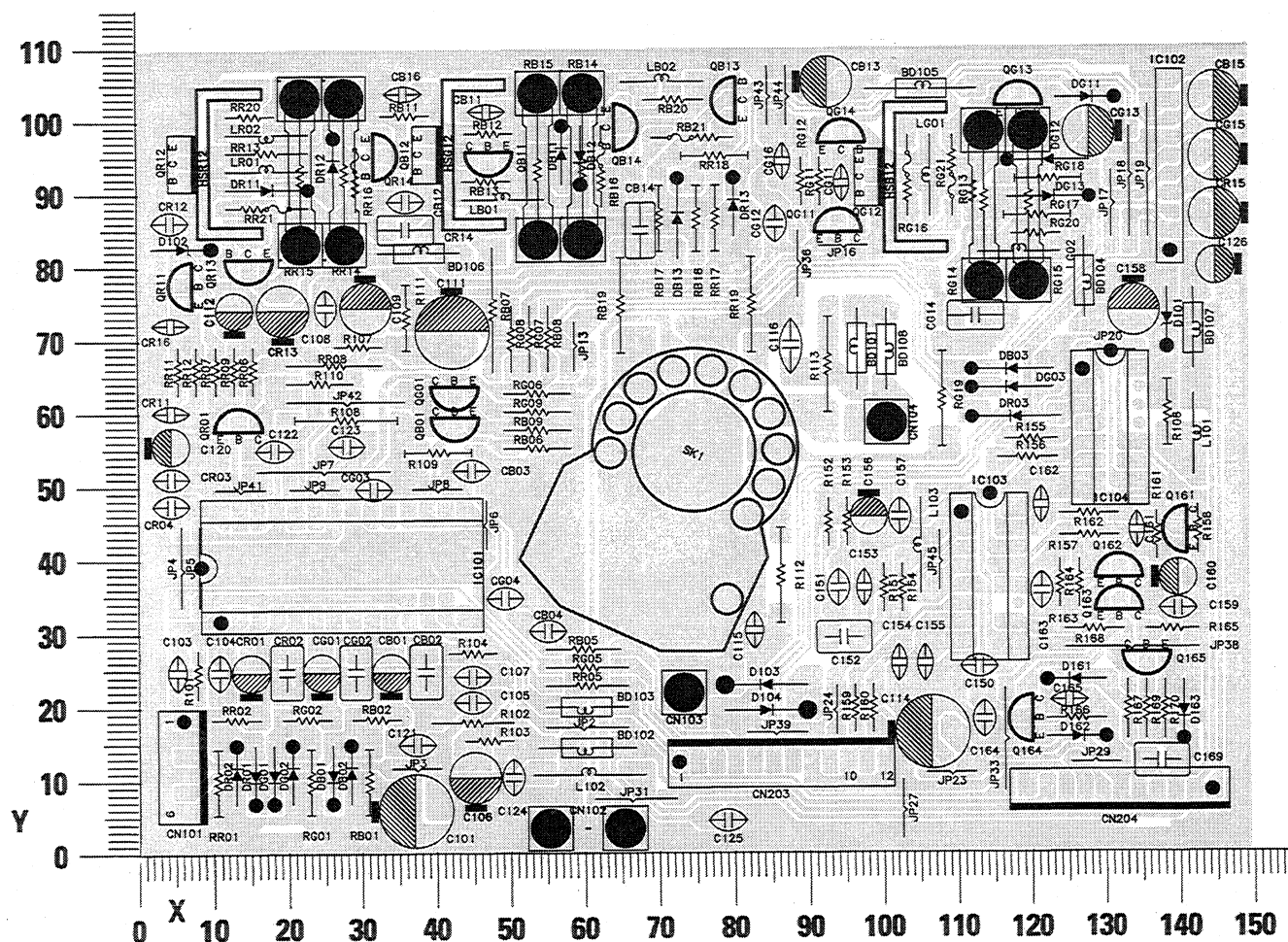
## 12-4-1 PCB Layout

Main PCB (Bottom View)



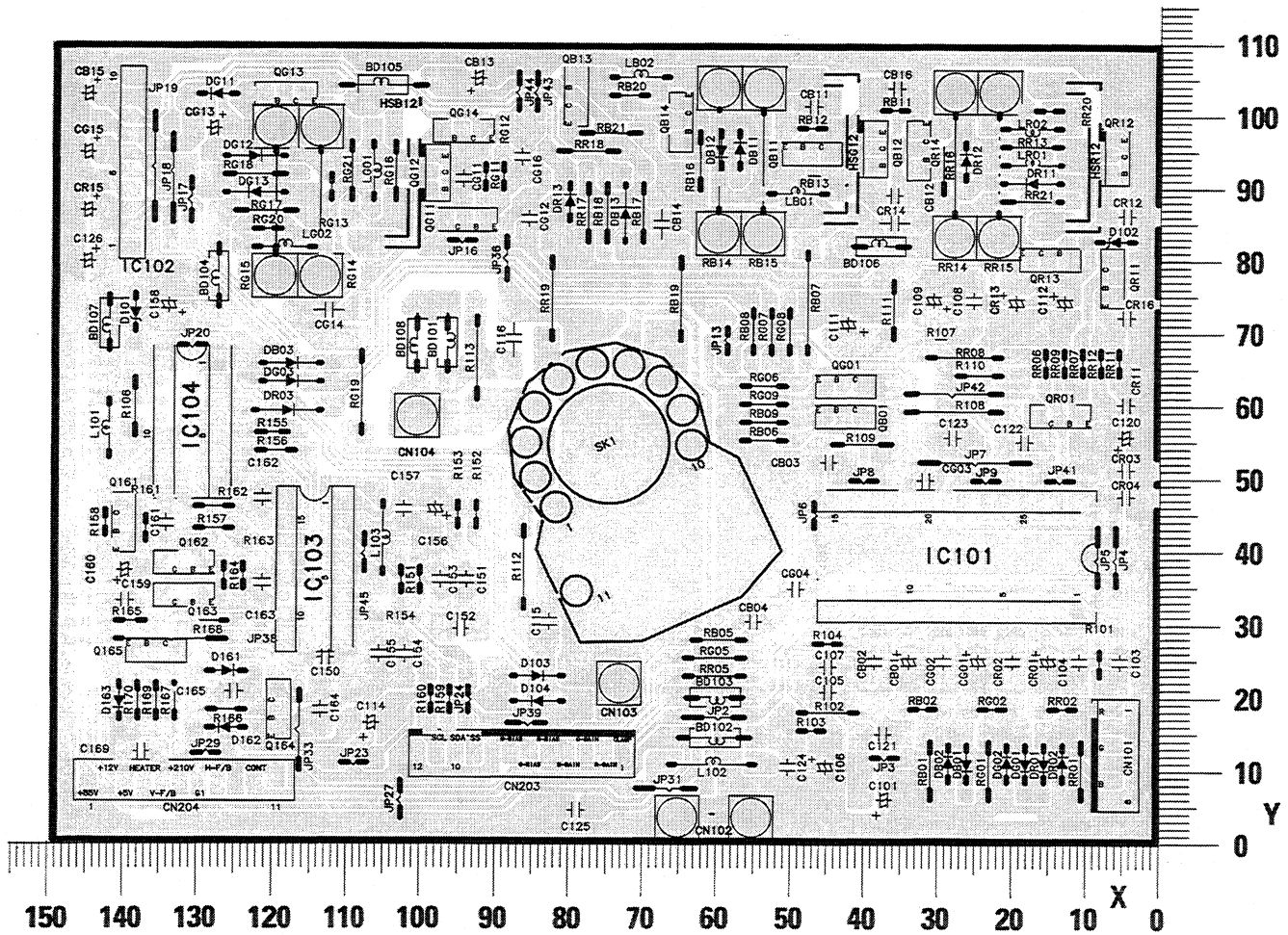


## 12-4-1 PCB Layout



Video PCB (Top View)

## 12-4-1 PCB Layout



Video PCB (Bottom View)

## 12-4-2 Electrical Parts List

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
Main PCB Parts						
BD171	94.5	8.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD172	24.5	90.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD173	101.6	25.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD174	35.1	42.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD175	66.0	33.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD201	319.4	121.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD202	127.1	129.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD204	36.0	217.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD205	94.3	204.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD208	38.6	140.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD209	90.7	199.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD210	118.3	164.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD211	46.9	163.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD212	119.0	188.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD213	122.6	188.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD214	39.8	206.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD301	41.7	61.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD304	120.2	71.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD305	92.6	57.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD306	107.3	71.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD400	70.0	96.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD401	128.4	173.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD402	151.1	196.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD403	118.9	119.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD404	118.6	233.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD406	172.1	109.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD407	220.2	208.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD408	222.4	117.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD409	233.7	173.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD410	118.3	170.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD412	112.0	199.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD413	115.6	199.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD414	103.5	188.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD415	107.8	83.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD416	56.5	109.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD417	87.3	126.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD501	238.0	129.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD502	174.0	135.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD503	198.3	126.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD504	217.3	145.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD505	228.1	127.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD506	231.8	112.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD507	239.7	173.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD508	222.2	153.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD509	235.3	127.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD601	222.1	31.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD602	229.5	41.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD603	247.5	35.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD604	106.6	75.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	

( ⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
BD605	255.8	85.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD606	157.5	55.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD607	156.2	101.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD608	234.3	47.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD609	148.3	113.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C171	51.9	37.8	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C172	97.5	16.3	917 121220HM	CAP-AL.ELEC,225M,1H	(T)50V 2.2M	
C173	88.2	29.9	916 356100LJAX	CAP-PPF,104J,2A	100V 104J	
C175	79.6	7.7	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
C176	93.7	13.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C177	101.9	15.9	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%	
C178	108.2	8.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C201	44.5	205.8	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C202	48.6	131.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C203	73.0	124.7	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C204	38.4	124.4	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C205	55.2	131.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C206	62.0	133.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C208	68.2	133.0	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C209	72.2	131.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C210	47.4	214.7	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C211	43.2	145.2	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C212	46.1	148.3	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C213	84.5	132.0	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C214	97.2	140.0	917 122330CM	CAP-AL.ELEC,336M,1C	(T)16V 33M	
C215	97.2	144.2	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C216	311.2	125.8	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C217	307.8	125.9	915 313120HJXH	CAP-CERAMIC,121J,1H,NPO	120PF,50V,5%,-,NPOPPM,NPO	
C218	100.1	185.7	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C219	105.7	179.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C220	70.0	203.4	917 123100CM	CAP-AL.ELEC,107M,1C	(T)16V 100M	
C221	109.5	179.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C222	93.7	169.3	915 312470HJXH	CAP-CERAMIC,470J,1H,NPO	47PF,50V,5%,-,NPOPPM,NPO	
C223	93.7	165.5	915 312470HJXH	CAP-CERAMIC,470J,1H,NPO	47PF,50V,5%,-,NPOPPM,NPO	
C224	38.6	159.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C225	116.8	161.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C228	112.5	170.6	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%	
C229	77.4	184.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C230	73.4	193.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C231	67.2	178.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C232	69.1	184.8	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C234	85.7	193.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C235	79.4	193.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C236	136.0	127.7	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C301	50.5	60.2	917 120470HM	CAP-AL.ELEC,474M,1H	(T)50V 0.47M	
C302	54.0	58.5	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C303	50.5	53.7	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C306	119.5	49.5	917 123220FM	CAP-AL.ELEC,227M,1V	(T)35V 220M	
C307	114.2	32.3	915 323470HKPH	CAP-CERAMIC,471K,1H,Y5P	470PF,50V,10%,10%,Y5P	
C308	127.2	36.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	



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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C309	132.0	36.6	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C310	131.8	23.3	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C312	131.0	60.4	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C314	130.4	81.6	916 165330LKAH	CAP-MYLAR,333K,2A,5P	(T)100V 333K	
C315	123.9	65.4	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C316	93.6	39.3	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C317	80.2	26.8	917 221470HM	CAP-AL.NP-ELEC,475M,1H	(T)50V 4.7M	
C318	117.9	22.0	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C319	94.7	51.6	916 165680LJAH	CAP-MYLAR,683J,2A,5P	(T)100V 683J	
C320	70.9	43.6	916 164470LJAH	CAP-MYLAR,472J,2A,5P	(T)100V 472J	
C323	124.0	36.6	916 164560LJAH	CAP-MYLAR,562J,2A,5P	(T)100V 562J	
C324	90.0	39.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C401	93.0	81.8	916 585220LJAX	CAP-MPETP,223J,2A	(T)100V 223J	
C402	88.7	81.9	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C403	84.9	88.0	915 312680HJXH	CAP-CERAMIC,680J,1H,NPO	68PF,50V,5%,NPOPPM,NPO	
C404	61.6	106.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C405	53.9	88.6	917 123100BM	CAP-AL.ELEC,107M,1A	(T)10V 100M	
C406	79.9	88.6	915 163680HJXH	CAP-CERAMIC,681J,1H,MONO	680pF,50V,5%,COG,RE-RADIAL	
C407	69.4	87.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C408	74.0	88.5	916 565100LKAH	CAP-MPETP,103K,2A,5P	(T)100V 103K	
C409	60.8	87.8	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C410	57.6	106.2	916 565100LKAH	CAP-MPETP,103K,2A,5P	(T)100V 103K	
C411	87.6	103.9	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C412	49.2	101.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C413	41.5	109.0	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
C414	46.0	94.1	917 123470CM	CAP-AL.ELEC,477M,1C	(T)16V 470M	
C415	96.6	48.7	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
C416	109.6	54.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C417	150.2	145.7	916 165150LJAH	CAP-MYLAR,153J,2A,5P	(T)100V 153J	
C418	157.7	159.5	917 121220HM	CAP-AL.ELEC,225M,1H	(T)50V 2.2M	
C419	81.8	59.3	916 164100LJAH	CAP-MYLAR,102J,2A,5P	(T)100V 102J	
C420	148.0	170.0	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C421	89.3	55.1	916 164270LJAH	CAP-MYLAR,272J,2A,5P	(T)100V 272J	
C422	81.7	55.6	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C425	57.0	224.0	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C426	65.3	224.2	917 221470FMAX	CAP-AL.NP-ELEC,475M,1V	(T)35V 4.7M	
C427	55.0	230.5	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C428	66.5	116.0	917 221470FMAX	CAP-AL.NP-ELEC,475M,1V	(T)35V 4.7M	
C429	66.9	235.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C430	145.5	160.5	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C431	161.8	195.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
C432	204.1	220.3	916 355150WJAX	CAP-PPF,153J,2J,15.5P	630V 153J(15P)	
C433	88.0	67.1	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C434	97.5	63.5	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C435	161.5	184.0	915 324180VKPH	CAP-CERAMIC,182K,2H,Y5P	1.8NF,500V,10%,10%,Y5P	
C436	137.6	164.5	917 813150JMAH	CAP-AL.ELEC,157M,1J,10X20	(T)150UF,63V,20%,R-RADIAL	
C438	163.1	206.9	916 537100QKAX	CAP-MPETP,3.3UF,2E,335K	3.3UF,250V,10%,R-AXIAL	
C439	170.4	226.0	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P	1NF,500V,20%,10%,Y5P	
C440	91.5	97.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C441	58.4	120.5	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C442	157.0	141.6	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C443	178.2	167.1	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P	1NF,500V,20%,10%,Y5P	
C444	156.1	138.4	917 742100LM	CAP-AL.ELEC,106M,2A,105C	(T)100V 10M	
C445	202.2	173.8	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C446	222.4	183.1	915 323100YKPX	CAP-CERAMIC,101K,3D,Y5P	100PF,2KV,10%,10%,Y5P	
C447	226.1	188.9	916 164470LJAH	CAP-MYLAR,472J,2A,5P	(T)100V 472J	
C448	71.5	58.5	917 222220CMAH	CAP-AL.NP-ELEC,226M,1C	(T)16V 22M	
C449	49.1	96.9	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C450	124.0	112.7	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM	
C451	64.8	87.8	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C453	162.6	218.2	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P	1NF,500V,20%,10%,Y5P,DISC-RADIAL	
C454	81.9	48.9	916 166220LJAX	CAP-MYLAR,224J,2A,9P	100V 224J	
C455	294.0	162.6	916 555680QKAX	CAP-MPETP,683K,2E	250V 683K	
C457	322.0	198.0	917 862220NMAH	CAP-AL.ELEC,226M,2C,10X20	(T)22UF,160V,20%,R-RADIAL	
C458	317.0	186.0	917 863470HMAH	CAP-AL.ELEC,477M,1H	(T)470UF,50V,20%,R-RADIAL	
C459	265.5	240.0	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C461	225.2	219.1	916 944550YJAX	CAP-MPE/PP,552J,3C,25P	1.6KV 552J	
C464	84.5	226.8	916 656150TJAX	CAP-MPPF,154J,2G	400V 154J	
C465	113.4	233.6	916 656270TJAX	CAP-MPPF,274J,2G	400V 274J	
C466	93.7	227.5	916 656180TJAX	CAP-MPPF,184J,2G,15P	400V 184J	
C467	102.6	232.0	916 656560QJAX	CAP-MPPF,564J,2E	250V 564J(22P)	
C468	146.1	143.1	916 165330LKAH	CAP-MYLAR,333K,2A,5P	(T)100V 333K	
C469	78.3	221.7	916 656270QJAL	CAP-MPPF,274J,2E,7.5P	(T)250V 274J	
C470	105.5	170.7	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C471	132.7	214.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C472	148.0	207.1	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
C473	117.8	97.1	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C475	109.1	170.7	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C476	105.3	202.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C477	83.6	214.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C478	148.9	154.2	915 312680HJXH	CAP-CERAMIC,680J,1H,NPO	68PF,50V,5%,NPOPPM,NPO	
C501	171.6	129.5	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C502	298.0	150.9	915 323470HKPH	CAP-CERAMIC,471K,1H,Y5P	470PF,50V,10%,10%,Y5P	
C503	244.0	171.1	916 943700YJAX	CAP-FILM,701J,3C,700PF	700PF,1600V,5%,RE-RADIAL	●
C504	260.3	126.4	917 862220QMAH	CAP-AL.ELEC,226M,2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C505	213.5	156.4	915 323680HKPH	CAP-CERAMIC,681K,1H,Y5P	680PF,50V,10%,10%,Y5P	
C506	210.5	154.4	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C507	185.5	137.8	917 122330CM	CAP-AL.ELEC,336M,1C	(T)16V 33M	
C508	196.3	149.5	916 354330LJAL	CAP-PPF,332J,2A,7.5P	(T)100V 332J	
C509	183.4	131.1	917 122100CM	CAP-AL.ELEC,106M,1C	(T)10UF,16V,20%,R-RADIAL,GP,5MM	
C510	183.3	126.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C511	212.8	128.1	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C512	257.2	228.4	916 566220JKAH	CAP-MPETP,224K,1J,5P	(T)63V 224K	
C513	252.5	233.4	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C514	293.8	132.3	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C515	226.5	165.0	916 943700YJAX	CAP-FILM,701J,3C,700PF	700PF,1600V,5%,RE-RADIAL	●
C516	255.8	153.8	917 312100EK	CAP-TANTAL,106K,1E	(T)10UF,25V,10%,DIP-RADIAL,5MM	
C518	192.5	130.1	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C519	228.2	137.1	915 323330XKPH	CAP-CERAMIC,331K,3A,DISC	330PF,1KV,10%,Y5P,DISC-RADIAL	
C601	294.5	8.5	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C602	306.8	59.4	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C603	307.2	67.6	918 146470QK	CAP-MPAPER,474K,250VAC	470NF,250VAC,10%,X2,RE-RAD,25.4	⚠
C604	313.5	78.0	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C605	324.0	90.0	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C606	265.6	69.5	917 793220TMAX	CAP-AL.ELEC,227M,2G,105C	(B)400V 220M 105 C	
C607	236.3	86.1	915 325100KXPX	CAP-CERAMIC,103K,3A,Y5P	10NF,1KV,10%,10%,Y5P	
C608	233.5	36.0	915 323330XKPH	CAP-CERAMIC,331K,3A,DISC	330PF,1KV,10%,Y5P,DISC-RADIAL	
C609	262.9	10.9	915 324220HKPH	CAP-CERAMIC,222K,1H,Y5P	2.2NF,50V,10%,10%,Y5P	
C610	253.3	9.5	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM,SL	
C611	258.8	11.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C612	218.9	23.9	917 122220CM	CAP-AL.ELEC,226M,1C	(T)22UF,16V,20%,R-RADIAL,GP	
C613	267.2	10.9	916 354680LJAH	CAP-PPF,682J,2A	(T)100V 682J	
C614	259.5	50.8	916 164150LJAH	CAP-MYLAR,152J,2A,3P	(T)100V 152J	
C615	246.8	43.6	917 862680LMAH	CAP-AL.ELEC,686M,2A,10X20	(T)68UF,100V,20%,R-RADIAL	
C616	264.7	47.0	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C617	229.2	23.2	915 374220QZEH	CAP-CERAMIC,222Z,2E,DISC	2.2NF,250V,-20TO+80%,-,RADIAL	
C618	261.5	30.7	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C619	234.5	63.0	915 323100YKPX	CAP-CERAMIC,101K,3D,Y5P	100PF,2KV,10%,10%,Y5P	
C620	153.7	10.1	917 864100CMAH	CAP-AL.ELEC,108M,1C,10x16	(T)1000UF,16V,20%,R-RADIAL	
C621	158.3	47.0	915 323220YKPX	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P	
C622	153.0	47.5	917 862220NMAH	CAP-AL.ELEC,226M,2C,10X20	(T)22UF,160V,20%,R-RADIAL	
C623	154.0	59.1	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C624	153.3	75.6	917 813150JMAH	CAP-AL.ELEC,157M,1J,10X20	(T)150UF,63V,20%,R-RADIAL	
C625	161.5	43.2	915 323220YKPX	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P	
C626	159.4	68.	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C627	163.2	82.	917 864100EMAH	CAP-AL.ELEC,108M,1E,12.5x20	(T)1000UF,25V,20%,R-RADIAL	
C628	164.3	65.7	917 122470EM	CAP-AL.ELEC,476M,1E	(T)25V 47M	
C629	174.1	97.6	917 864100CMAH	CAP-AL.ELEC,108M,1C,10x16	(T)1000UF,16V,20%,R-RADIAL	
C630	177.4	84.1	917 874220CMAH	CAP-AL.ELEC,228M,1C,105C	(T)16V 2200UF,20%,R-RADIAL	
C631	186.5	84.3	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C632	216.5	103.4	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C633	216.4	97.9	917 864100CMAH	CAP-AL.ELEC,108M,1C,10x16	(T)1000UF,16V,20%,R-RADIAL	
C634	182.1	106.5	917 121100NM	CAP-AL.ELEC,105M,2C	(T)160V 1M	
C635	202.9	96.3	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C636	202.4	107.5	917 122330CM	CAP-AL.ELEC,336M,1C	(T)16V 33M	
C637	194.0	88.5	917 123220FM	CAP-AL.ELEC,227M,1V	(T)35V 220M	
C638	102.5	134.2	917 123470CM	CAP-AL.ELEC,477M,1C	(T)16V 470M	
C639	98.1	135.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C640	196.2	97.8	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C641	193.0	110.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C642	199.0	24.0	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C643	165.5	23.5	915 324220VKPH	CAP-CERAMIC,222K,2H,Y5P	2.2NF,500V,10%,10%,Y5P	
C645	188.6	21.6	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C646	162.2	8.6	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C647	154.8	29.9	917 862220QMAH	CAP-AL.ELEC,226M,2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C648	154.6	23.0	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C649	162.5	29.0	915 323220YKPX	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P	
C650	267.2	109.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C651	259.4	110.3	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C652	135.3	90.7	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C653	214.8	15.4	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C654	207.3	6.4	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	









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C655	290.0	93.1	915 374220QZEH	CAP-CERAMIC,222Z,2E,DISC	2.2NF,250V,-20TO+80%,-,RADIAL	
C656	282.0	81.3	915 374220QZEH	CAP-CERAMIC,222Z,2E,DISC	2.2NF,250V,-20TO+80%,-,RADIAL	
CF101	311.5	158.5	955 460035AAAA	CBF-CONN ASSY,200MM,6P	5102-06,1185#26,200MM	
CF203	84.9	190.5	955 460551AAAA	CBF-CONN ASSY,400MM,12P	R.G.B, GAIN,CMA/B, FLAT	●
CF204	146.0	108.2	955 460534AAAA	CBF-CONN ASSY,300MM,11P	5102-11,5395-11,CSQ4327	●
CF206	25.1	77.2	955 460534AAAA	CBF-CONN ASSY,300MM,11P	5102-11,5395-11,CSQ4327	●
CN200	316.0	144.0	935 100115MD	CON-D-SUB,15P,RECEPTACLE	ANGLE,AU30U,-,-,4-40U	
CN201	103.7	239.0	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN202	24.8	214.7	935 241303EA	CON-WALL HEADER,3P,2.5MM	ANGLE,1WALL,SN	
CN203	41.0	202.7	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN204	91.4	235.3	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN205	318.2	223.6	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN206	40.7	10.6	935 240111DA	CON-BOX HEADER,11P,2.5MM	1R,STRAIGHT,SN	●
CN207	5.0	69.5	935 720084AA	CON-MINIATURE JACK	3P,8.6X8X12.7MM	
CN210	56.7	185.8	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN301	206.1	193.4	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN302	206.1	185.9	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN401	206.1	200.9	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN402	206.1	211.4	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN403	114.9	12.8	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN404	108.5	238.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN602	320.0	107.4	935 240903DLSA	CON-WALL HEADER,3P,3.96	STRAIGHT,1WALL,-	
CN604	265.5	88.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN605	273.0	88.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
D172	54.7	35.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D173	45.0	33.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D174	53.0	21.4	893 290002AC	DIODE-ZEN,ZPD2,7,DO-35	0.5W,-,5MA,-,-,-	
D175	53.0	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D177	78.6	24.1	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
D201	315.0	210.5	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D202	5.1	216.0	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D203	315.0	213.0	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D204	11.1	229.7	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D205	42.8	199.0	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D206	50.5	196.5	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D207	42.5	191.6	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D208	50.5	194.1	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D210	142.2	31.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D212	308.0	142.2	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D216	324.5	126.7	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D217	324.5	124.3	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D301	124.5	41.7	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D303	81.0	52.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D304	142.0	76.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D401	73.1	100.1	893 290031BB	DIODE-ZEN,UZ-12BM,DO-35	0.5W,-,5MA,-,-,-	
D402	140.0	195.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D403	169.5	188.4	893 399006AA	AM DIODE-REC,RGP02-12E,DO-4	ST 02169-206-297	
D404	44.5	115.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D405	109.0	188.6	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D406	157.4	180.0	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	

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D407	106.5	188.6	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-	⚠
D408	208.0	173.4	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D410	214.9	202.3	893 399073AA	DIODE-REC,5THZ52	1500V,5A,1.5V,5A,1.5US	
D411	180.7	215.6	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D412	169.7	212.2	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D413	299.6	173.2	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D414	296.0	217.9	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D415	303.6	200.1	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D418	126.4	212.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D419	126.4	210.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D420	140.0	203.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D421	170.2	165.8	893 390010AD	DIODE-REC,RGP10G,DO-41	280V,1A,1.3V,1A,150NS,0.5A	
D423	148.0	200.5	893 290002AC	DIODE-ZEN,ZPD2.7,DO-35	0.5W,-,5MA,-,-	
D424	52.0	238.0	893 290031CB	DIODE-ZEN,UZ-27BM,DO-35	0.5W,-,5MA,-,-	
D426	81.2	104.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D427	83.7	96.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D501	175.3	132.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D502	238.7	153.0	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D503	199.5	148.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D504	181.5	134.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D505	186.0	134.6	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D506	261.4	158.6	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D507	238.0	233.0	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D508	249.0	229.5	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D509	267.9	154.0	893 399001AA	DIODE-REC,CGJ-1,-	880V,-,1.1V,1A,750NS,0.002A	
D510	219.4	122.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D511	238.0	226.0	893 290002BC	DIODE-ZEN,ZPD9.1,DO-41	0.5W,8.1V,5MA,-,-	
D512	221.3	148.5	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D513	264.0	150.3	893 314001AANH	DIODE-REC,1N4001,DO-41	50V,1A,1.1V,1A,-,-	
D514	249.7	148.3	893 314001AANH	DIODE-REC,1N4001,DO-41	50V,1A,1.1V,1A,-,-	
D601	290.0	89.8	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D602	279.0	85.9	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D603	279.0	78.6	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D604	290.0	74.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D605	222.0	46.6	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
D606	237.5	23.5	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
D607	244.5	29.9	893 290031DC	DIODE-ZEN,UZ-24BH,DO-35	0.5W,-,5MA,-,-	
D608	273.1	20.6	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D609	221.8	69.8	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
D610	255.0	37.0	893 290031HB	DIODE-ZEN,UZ-16BM,DO-35	0.5W,-,5MA,-,-	
D611	255.1	48.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D614	184.0	36.0	893 399032AA	DIODE-REC,1R5NU41	-,1.5A,3V,2A,100USNS,1A	
D615	169.0	27.0	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D616	184.0	40.5	893 399032AA	DIODE-REC,1R5NU41	-,1.5A,3V,2A,100USNS,1A	
D617	175.1	50.3	893 399083AA	DIODE-REC,FMG-G26S,FM-20	600V,4A,2.5V,4A,100NS,4A	
D618	184.0	70.0	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D619	184.0	65.5	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D620	182.5	79.0	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D621	184.0	74.5	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D624	183.4	83.7	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
D626	192.0	20.0	893 290031BB	DIODE-ZEN,UZ-12BM,DO-35	0.5W,-,5MA,-,-	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
D627	192.0	17.5	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D628	152.9	112.0	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D629	269.9	102.6	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
EY401	135.7	183.4	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY402	146.7	183.4	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY403	163.1	199.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY404	163.1	206.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY405	214.8	176.1	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY406	214.9	170.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY407	257.8	166.1	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY408	269.0	166.1	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY409	283.4	182.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY410	276.7	192.8	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY411	257.8	195.1	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY412	214.9	213.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY413	155.4	222.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY414	155.4	233.6	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY415	113.4	211.1	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY416	113.3	233.7	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY417	93.8	227.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY418	93.7	214.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY419	196.9	212.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY601	314.0	38.0	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
EY602	314.0	52.0	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
EY603	299.5	17.5	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
EY604	287.3	17.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY605	280.5	56.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY606	293.2	41.4	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY607	265.6	69.5	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
EY608	230.0	52.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY609	215.0	37.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY610	215.0	66.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY611	190.0	72.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY612	190.0	56.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY613	215.0	61.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
EY614	265.5	59.5	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
F601	306.8	34.2	949 115105TH	FUSE-CERAMIC,TUBE,3.15A,250V	TIME-LAG,5X20MM,NON	
FH601	306.8	44.5	953 260023BC	FUSE-CLIP,5.2X20,30MOHM	800GF,400-800GF	
HS301	119.5	12.0	831 513022AA	H/SINK-IC	HEAT-SINK(IC)	
HSD617	172.6	55.3	831 511012AC	H/SINK-TR	HEAT-SINK(TR)	
HSQ411	219.1	236.2	831 514509AA	H/SINK-FBT	HEAT-SINK(FBT)	
HSQ503	242.2	139.8	831 511012AC	H/SINK-TR	HEAT-SINK(TR)	
HSQ505	206.9	139.6	831 513023AA	H/SINK-TR	HEAT-SINK(TR)	
HSQ601	232.1	10.1	831 513523DA	H/SINK-TR	HEAT-SINK(TR)	
HSQ602	261.2	39.0	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
IC201	53.5	147.4	877 307271AA	IC-CUS,ST7271A,CONTROLLER	DIP,56,8MHz,8Bit	 
IC202	93.8	138.9	881 307045TA	IC-LIN,7045,REGULATOR	TO-92,3,-,+4.5V	
IC203	54.5	206.8	883 609356AA	IC-MEM,EPROM,93C56,-	DIP,8,-,-	
IC301	128.4	53.3	881 708172SA	IC-LIN,8172,VERTICAL	-7,-,-	 
IC401	84.9	79.9	881 709103AA	IC-LIN,9103,H/V CONTROLLER	POS,SIZE,PARA,XRAY,H/V REG. CON	 

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
IC402	45.2	221.6	881 100324AANB	IC-LIN,324,OP AMP	DIP,14,QUAD	⚠ ⚠ ⚡ ⚡
IC501	210.0	145.0	881 600494AA	IC-LIN,DL494,PWM	DIP,16,-,-	
IC601	259.3	14.0	881 903882AA	IC-LIN,3844,PWM CONTROL	DIP,8,-,-	
IC602	204.5	25.9	895 520080AA	OPT-COUP,TR,CQY80NG	50%,90%,-,250MW,1 ,DIP-6	
IC603	177.5	18.0	881 300431TANB	IC-LIN,431,REGULATOR	TO-92,3,-,36V(T)-SIMPLE	
IC604	105.9	126.9	881 307805KANE	IC-LIN,7805,REGULATOR	TO-220,3,-,5V	
IC605	207.0	94.5	881 307812KE	IC-LIN,KA78R12,REGULATOR	SEP,0.5,-,5V	
IS601	314.0	38.0	935 710008GA	CON-SOCKET,AC,INLET	3P,22.5X30MM,AC250V,10A	
JP1	312.1	73.3	955 005001AAAB	JUMPER	JUMPER	
JP2	255.8	89.0	955 005001AAAB	JUMPER	JUMPER	
JP3	303.4	77.2	955 005001AAAB	JUMPER	JUMPER	
JP4	93.3	221.3	955 005001AAAB	JUMPER	JUMPER	
JP5	255.2	45.4	955 005001AAAB	JUMPER	JUMPER	
JP6	199.0	27.1	955 005001AAAB	JUMPER	JUMPER	
JP7	176.0	44.7	955 005001AAAB	JUMPER	JUMPER	
JP8	196.1	80.0	955 005001AAAB	JUMPER	JUMPER	
JP9	196.2	77.5	955 005001AAAB	JUMPER	JUMPER	
JP10	274.9	239.0	955 005001AAAB	JUMPER	JUMPER	
JP11	144.9	6.0	955 005001AAAB	JUMPER	JUMPER	
JP12	172.5	29.0	955 005001AAAB	JUMPER	JUMPER	
JP13	155.0	69.5	955 005001AAAB	JUMPER	JUMPER	
JP14	154.0	87.4	955 005001AAAB	JUMPER	JUMPER	
JP15	148.5	93.9	955 005001AAAB	JUMPER	JUMPER	
JP16	142.4	96.3	955 005001AAAB	JUMPER	JUMPER	
JP17	68.0	22.4	955 005001AAAB	JUMPER	JUMPER	
JP18	68.0	24.9	955 005001AAAB	JUMPER	JUMPER	
JP19	143.4	100.0	955 005001AAAB	JUMPER	JUMPER	
JP20	143.4	102.5	955 005001AAAB	JUMPER	JUMPER	
JP21	225.5	161.0	955 005001AAAB	JUMPER	JUMPER	
JP22	297.8	29.0	955 005001AAAB	JUMPER	JUMPER	
JP23	127.3	134.9	955 005001AAAB	JUMPER	JUMPER	
JP24	116.2	88.6	955 005001AAAB	JUMPER	JUMPER	
JP25	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP26	102.0	71.3	955 005001AAAB	JUMPER	JUMPER	
JP28	115.0	166.3	955 005001AAAB	JUMPER	JUMPER	
JP29	90.1	131.9	955 005001AAAB	JUMPER	JUMPER	
JP30	57.7	5.5	955 005001AAAB	JUMPER	JUMPER	
JP31	99.5	30.3	955 005001AAAB	JUMPER	JUMPER	
JP32	99.5	27.8	955 005001AAAB	JUMPER	JUMPER	
JP33	138.2	62.5	955 005001AAAB	JUMPER	JUMPER	
JP34	228.0	161.0	955 005001AAAB	JUMPER	JUMPER	
JP35	45.5	45.4	955 005001AAAB	JUMPER	JUMPER	
JP36	114.9	16.9	955 005001AAAB	JUMPER	JUMPER	
JP37	47.4	72.0	955 005001AAAB	JUMPER	JUMPER	
JP38	257.0	147.5	955 005001AAAB	JUMPER	JUMPER	
JP39	42.5	72.0	955 005001AAAB	JUMPER	JUMPER	
JP40	187.0	242.0	955 005001AAAB	JUMPER	JUMPER	
JP41	184.6	242.0	955 005001AAAB	JUMPER	JUMPER	
JP42	63.5	112.5	955 005001AAAB	JUMPER	JUMPER	
JP43	38.9	137.7	955 005001AAAB	JUMPER	JUMPER	
JP44	36.4	136.6	955 005001AAAB	JUMPER	JUMPER	




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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP45	141.8	81.1	955 005001AAAB	JUMPER	JUMPER	
JP46	36.9	187.2	955 005001AAAB	JUMPER	JUMPER	
JP47	272.5	226.5	955 005001AAAB	JUMPER	JUMPER	
JP48	60.7	164.5	955 005001AAAB	JUMPER	JUMPER	
JP49	74.0	176.0	955 005001AAAB	JUMPER	JUMPER	
JP50	77.0	176.0	955 005001AAAB	JUMPER	JUMPER	
JP51	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP52	103.1	185.5	955 005001AAAB	JUMPER	JUMPER	
JP55	128.6	240.2	955 005001AAAB	JUMPER	JUMPER	
JP56	104.4	71.5	955 005001AAAB	JUMPER	JUMPER	
JP57	123.9	195.9	955 005001AAAB	JUMPER	JUMPER	
JP58	205.0	170.0	955 005001AAAB	JUMPER	JUMPER	
JP59	117.6	57.1	955 005001AAAB	JUMPER	JUMPER	
JP63	101.9	115.9	955 005001AAAB	JUMPER	JUMPER	
JP64	138.9	153.6	955 005001AAAB	JUMPER	JUMPER	
JP65	307.6	115.0	955 005001AAAB	JUMPER	JUMPER	
JP66	228.7	139.4	955 005001AAAB	JUMPER	JUMPER	
JP67	320.0	95.6	955 005001AAAB	JUMPER	JUMPER	
JP68	137.5	138.4	955 005001AAAB	JUMPER	JUMPER	
JP69	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP70	126.2	126.2	955 005001AAAB	JUMPER	JUMPER	
JP71	124.8	123.3	955 005001AAAB	JUMPER	JUMPER	
JP72	302.8	132.0	955 005001AAAB	JUMPER	JUMPER	
JP74	140.0	131.0	955 005001AAAB	JUMPER	JUMPER	
JP75	163.1	232.4	955 005001AAAB	JUMPER	JUMPER	
JP76	91.7	135.7	955 005001AAAB	JUMPER	JUMPER	
JP79	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP81	120.6	156.7	955 005001AAAB	JUMPER	JUMPER	
JP83	165.0	128.0	955 005001AAAB	JUMPER	JUMPER	
JP84	167.6	127.0	955 005001AAAB	JUMPER	JUMPER	
JP85	199.5	220.1	955 005001AAAB	JUMPER	JUMPER	
JP86	160.8	154.9	955 005001AAAB	JUMPER	JUMPER	
JP87	189.5	145.0	955 005001AAAB	JUMPER	JUMPER	
JP88	204.5	116.3	955 005001AAAB	JUMPER	JUMPER	
JP89	211.6	187.3	955 005001AAAB	JUMPER	JUMPER	
JP90	216.4	118.1	955 005001AAAB	JUMPER	JUMPER	
JP91	246.0	121.8	955 005001AAAB	JUMPER	JUMPER	
JP92	277.5	119.9	955 005001AAAB	JUMPER	JUMPER	
JP93	217.9	155.7	955 005001AAAB	JUMPER	JUMPER	
JP94	111.5	139.6	955 005001AAAB	JUMPER	JUMPER	
JP95	317.5	129.6	955 005001AAAB	JUMPER	JUMPER	
JP97	81.3	135.4	955 005001AAAB	JUMPER	JUMPER	
JP98	304.7	98.9	955 005001AAAB	JUMPER	JUMPER	
JP100	93.3	110.1	955 005001AAAB	JUMPER	JUMPER	
JP101	105.5	78.1	955 005001AAAB	JUMPER	JUMPER	
JP102	248.5	121.8	955 005001AAAB	JUMPER	JUMPER	
JP103	251.0	121.8	955 005001AAAB	JUMPER	JUMPER	
JP105	234.6	160.5	955 005001AAAB	JUMPER	JUMPER	
JP107	233.0	201.9	955 005001AAAB	JUMPER	JUMPER	
JP108	125.9	55.5	955 005001AAAB	JUMPER	JUMPER	



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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP109	95.7	108.4	955 005001AAAB	JUMPER	JUMPER	
JP112	128.8	217.4	955 005001AAAB	JUMPER	JUMPER	
JP113	95.4	68.9	955 005001AAAB	JUMPER	JUMPER	
JP114	40.0	72.0	955 005001AAAB	JUMPER	JUMPER	
JP115	220.0	203.2	955 005001AAAB	JUMPER	JUMPER	
JP116	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP119	66.2	215.0	955 005001AAAB	JUMPER	JUMPER	
JP120	107.4	80.9	955 005001AAAB	JUMPER	JUMPER	
JP122	101.9	118.5	955 005001AAAB	JUMPER	JUMPER	
JP123	109.7	166.7	955 005001AAAB	JUMPER	JUMPER	
JP124	108.1	78.1	955 005001AAAB	JUMPER	JUMPER	
JP125	118.4	149.3	955 005001AAAB	JUMPER	JUMPER	
JP126	253.5	121.8	955 005001AAAB	JUMPER	JUMPER	
JP127	310.4	115.0	955 005001AAAB	JUMPER	JUMPER	
JP128	199.3	170.0	955 005001AAAB	JUMPER	JUMPER	
JP129	202.2	170.0	955 005001AAAB	JUMPER	JUMPER	
JP130	305.3	132.0	955 005001AAAB	JUMPER	JUMPER	
JP131	197.8	123.0	955 005001AAAB	JUMPER	JUMPER	
JP132	209.2	123.0	955 005001AAAB	JUMPER	JUMPER	
JP134	173.5	79.0	955 005001AAAB	JUMPER	JUMPER	
JP135	170.5	104.6	955 005001AAAB	JUMPER	JUMPER	
JP136	120.6	105.5	955 005001AAAB	JUMPER	JUMPER	
JP137	43.9	138.2	955 005001AAAB	JUMPER	JUMPER	
JP138	244.1	70.4	955 005001AAAB	JUMPER	JUMPER	
JP139	35.1	38.4	955 005001AAAB	JUMPER	JUMPER	
JP140	50.8	215.0	955 005001AAAB	JUMPER	JUMPER	
JP141	68.8	215.0	955 005001AAAB	JUMPER	JUMPER	
JP142	81.5	234.5	955 005001AAAB	JUMPER	JUMPER	
JP143	81.5	237.0	955 005001AAAB	JUMPER	JUMPER	
JP144	113.2	25.3	955 005001AAAB	JUMPER	JUMPER	
JP145	50.0	167.0	955 005001AAAB	JUMPER	JUMPER	
JP146	123.9	198.9	955 005001AAAB	JUMPER	JUMPER	
JP147	305.8	100.2	955 005001AAAB	JUMPER	JUMPER	
JP148	317.0	99.1	955 005001AAAB	JUMPER	JUMPER	
JP149	93.0	132.7	955 005001AAAB	JUMPER	JUMPER	
JP150	239.9	119.7	955 005001AAAB	JUMPER	JUMPER	
JP151	310.6	142.2	955 005001AAAB	JUMPER	JUMPER	
JP152	313.1	141.5	955 005001AAAB	JUMPER	JUMPER	
JP153	317.5	132.1	955 005001AAAB	JUMPER	JUMPER	
L201	84.8	184.6	925 001001AN	INDUCTOR-AXIAL,220UH	FIX,220UH,10%,4X10.5MM	
L401	91.6	105.7	925 001001AH	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,65,-,4X10.5MM	
L402	109.2	46.1	925 001001AN	INDUCTOR-AXIAL,220UH	FIX,220UH,10%,4X10.5MM	
L403	135.7	183.4	925 460183BA	COIL-CHOKE,130uH +/-15%	12_15MM,ROBOT TYPE	●
L404	196.8	212.0	925 460186CA	COIL-CHOKE,7.5mH	DR 10X10MM,2UEW 0.15MM	⚠
L406	186.3	229.0	925 460125AA	COIL-CHOKE,200UH	C/MONITOR,CVL 4951	●
L407	155.4	222.5	925 460187AB	COIL_H/LINEARITY.18.5UH	CSR5977,18.5UH	⚠
L408	148.2	214.6	925 001001AC	INDUCTOR-AXIAL,33UH	FIX,33UH,10%,33-90,-,4X10MM	
L409	131.9	232.5	925 001001AC	INDUCTOR-AXIAL,33UH	FIX,33UH,10%,33-90,-,4X10MM	
L410	108.5	101.4	925 001001AN	INDUCTOR-AXIAL,220UH	FIX,220UH,10%,4X10.5MM	
L501	269.7	138.2	925 460183BA	COIL-CHOKE,130uH +/-15%	12_15MM,ROBOT TYPE	●
L601	280.6	56.4	925 460178JA	COIL-LINE FILTER,15MH	15MH,CSK5577	⚠

(  : Caution,  : Specialty part for this monitor only,  : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
L602	296.4	84.5	925 460185CA	COIL-LINE FILTER,3mH	1.0A,BSF-2140,8,1UEW0.40	
NR201	81.6	165.9	887 135472SG	IC-HYB,R-NETWORK,9P	SIP,9,8,4.7KOHM,5%	
OP201	13.0	108.0	895 110048DB	LED,G/Y,ROUND,4.8MM	4.8MM,N,2-LOW,5V	
PR601	303.9	107.1	897 110541AA	POSISTOR,14,SQUARE,13.5X17.7	20%, -,15~20%/C	
Q101	96.2	190.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	  
Q171	45.7	30.2	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q172	105.9	16.1	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q173	92.7	21.8	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q174	80.0	15.1	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q201	43.7	7.1	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q202	117.2	158.3	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q203	105.0	150.4	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q301	129.6	68.4	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q302	133.6	68.4	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q303	82.0	39.5	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q401	93.6	88.2	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q402	60.6	224.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q403	59.0	230.5	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q404	154.1	172.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q405	155.9	163.9	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q406	151.5	182.1	891 890630AA	FET-N,IRF630,TO-220,GDS	75W,200V,9A	
Q407	79.0	112.0	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q408	80.2	117.3	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q409	40.0	118.9	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q410	154.1	151.5	891 463502AA	TR-NPN,2SC3502,TO-126,ECB	1.2W,-200V,-200V,-5V,-0.1A	
Q411	214.9	176.0	891 463886AA	TR-NPN,2SC3886A,2-16E3A	50W,1500V,600V,5V,8A	
Q412	153.0	154.6	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q413	72.7	18.8	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q414	56.7	19.1	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q415	87.1	218.7	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q416	112.7	208.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q418	137.3	198.1	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q419	84.0	209.8	891 890021AB	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q420	99.1	206.1	891 890021AB	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q422	87.5	115.8	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q423	68.9	40.5	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q501	293.8	141.1	891 890610AA	FET-N,IRF610,TO-220AB,GDS	43W,200V,3.3A	
Q502	188.8	148.8	891 392222XA	TR-NPN,MPS2222A,TO-92,EBC	0.625W,75V,40V,6V,0.6A	
Q503	236.8	133.3	891 465149AA	TR-NPN,2SC5149,TO-3P	50W,1500V,600V,5V,8A	
Q504	191.5	134.2	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q505	217.5	136.9	891 890740AA	AM FET-N,IRF740,TO-220	ST 02149-601-441	
Q601	230.0	46.6	891 890680AA	FET-N,SSH6N80,TO-3P	150W,800V,6.0A	
Q602	263.2	41.8	891 493503AA	TR-NPN,KSC3503,TO-126,ECB	1.2W,300V,300V,5V,0.1A	
Q603	186.8	98.5	891 191013AA	TR-PNP,2SA1013-Y,TO-92MOD	0.9W,-160V,-160V,-6V,-1A	
Q604	197.1	101.5	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q605	251.2	49.6	891 390045XANA	TR-NPN,MPSA45,TO-92,EBC	0.625W,400V,350V,6V,0.3A	
Q606	200.6	98.8	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q607	192.6	6.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q608	263.1	100.6	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
R102	93.8	182.0	911 134707YA	REF-CF,470,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R170	66.0	30.4	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R171	53.2	13.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R173	103.9	12.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R174	91.8	7.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R175	45.5	47.8	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R176	85.1	21.6	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R177	85.1	19.0	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R178	53.0	16.4	911 158207YA	REF-CF,82K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R179	277.6	239.0	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R181	53.0	26.4	911 164707YA	REF-CF,470K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R184	45.0	23.9	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R201	54.0	136.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R202	50.4	159.2	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R203	56.5	136.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R204	59.0	136.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R205	53.3	54.8	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R206	56.7	49.0	911 161207YA	REF-CF,120K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R207	61.6	136.5	911 149107YA	REF-CF,9.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R208	45.9	131.5	911 148207YA	REF-CF,8.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R209	53.3	52.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R210	59.8	49.0	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R211	64.5	144.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R212	54.3	86.2	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R213	40.0	82.0	911 161207YA	REF-CF,120K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R214	67.0	136.5	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R215	62.9	42.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R216	65.4	49.0	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R217	69.5	136.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R218	76.5	43.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R220	72.0	136.5	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R221	84.5	43.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R222	90.6	49.6	911 153607YA	REF-CF,36K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R223	41.5	159.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R224	51.0	144.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R225	48.5	144.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R226	74.9	138.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R227	78.0	144.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R228	46.5	151.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R229	50.8	202.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R230	36.0	192.0	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R231	19.6	208.6	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R232	22.0	168.0	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R233	19.0	166.0	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R234	19.0	148.0	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R235	44.0	151.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R236	50.5	189.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R237	38.6	198.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R238	19.1	232.7	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R239	9.0	208.6	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R240	6.0	194.5	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R241	9.0	187.9	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R242	107.0	154.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R243	84.5	144.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R244	90.5	137.9	911 132207YA	REF-CF,220,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R246	107.9	146.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R248	112.2	156.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R249	99.5	172.3	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R250	90.3	183.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R251	87.9	183.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R252	115.1	176.9	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R253	134.3	167.7	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R254	36.6	14.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R255	57.7	8.0	911 137507DA	REF-CF,750,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R256	17.4	89.2	911 132007DA	REF-CF,200,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R257	71.4	176.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R258	69.0	176.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R259	66.5	175.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R260	64.0	175.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R261	60.2	176.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R262	47.3	177.3	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R263	57.1	177.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R264	54.7	177.4	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R265	49.7	177.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R266	52.2	177.4	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R267	55.2	196.7	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R268	55.2	194.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R269	42.1	177.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R270	44.7	177.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R271	65.2	204.2	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R272	67.7	204.2	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R276	133.3	128.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R277	107.9	151.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R278	107.9	149.0	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R279	114.5	144.0	911 134707YA	REF-CF,470,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R280	104.5	162.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R281	57.7	10.5	911 137507DA	REF-CF,750,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R301	54.2	43.0	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R302	51.6	49.5	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R303	155.7	66.3	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-,350 TO +350PPM/C,R-AXIAL	
R304	155.5	19.9	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-,350 TO +350PPM/C,R-AXIAL	
R305	103.6	31.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R306	120.4	30.1	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R307	133.4	20.3	911 134707FF	REF-CF,470,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R309	122.5	17.0	911 111207FA	REF-CF,1.2,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R310	120.6	41.6	911 311007JF	REF-MO,1.5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R311	135.2	35.5	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R312	106.1	31.5	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R313	135.5	54.4	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R315	127.0	66.9	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R316	127.0	82.0	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R317	124.3	82.0	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	

( ⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)




Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R318	134.0	78.6	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R319	95.3	135.8	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R320	96.7	33.0	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R321	117.2	27.4	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R322	93.1	43.0	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R323	67.9	43.0	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R327	88.1	49.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R328	82.0	138.0	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R400	107.7	85.5	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R401	110.2	93.1	911 154307YA	REF-CF,43K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R402	88.2	84.2	911 455105DA	REF-MF,51K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R403	73.8	84.2	911 451505DA	REF-MF,15K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R404	115.0	105.5	911 152407DA	REF-CF,24K,5%,1/4W	250V,-600 TO -150PPM/C,R-AXIAL	
R405	77.2	88.2	911 445605DA	REF-MF,5.6K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R406	67.0	96.5	911 138207YA	REF-CF,820,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R407	57.8	86.2	911 451805DA	REF-MF,18K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R408	70.6	84.2	911 452005DA	REF-MF,20K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R409	53.3	105.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R410	75.5	108.1	911 137507YA	REF-CF,750,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R411	78.1	108.1	911 144307YA	REF-CF,4.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R412	127.4	132.5	911 144307YA	REF-CF,4.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R413	41.5	112.5	911 143307DA	REF-CF,3.3K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R414	143.0	145.7	911 452205DA	REF-MF,22K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R415	102.4	68.2	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R416	110.3	67.5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R417	81.5	62.0	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R418	68.9	60.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R419	58.7	123.6	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R420	75.3	127.5	911 161207YA	REF-CF,120K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R421	106.0	113.3	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R422	172.4	170.5	911 311507JF	REF-MO,1.5,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R423	53.5	119.7	911 171007DA	REF-CF,1M,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
R424	52.0	219.0	911 134707YA	REF-CF,470,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R425	60.5	214.9	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R426	49.5	231.5	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R427	43.6	208.2	911 161507YA	REF-CF,150K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R428	63.9	221.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R429	61.0	227.5	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R430	49.5	219.0	911 161507YA	REF-CF,150K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R431	60.9	232.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R432	57.0	115.0	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R433	100.1	59.3	911 142407YA	REF-CF,2.4K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R434	150.4	157.4	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R435	164.0	181.0	911 122207FF	REF-CF,22,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R436	148.0	193.0	911 161007FF	REF-CF,100K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R437	132.0	151.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R438	84.5	52.8	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R439	184.2	229.0	911 331007GF	REF-MO,100,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R441	110.2	95.6	911 154307YA	REF-CF,43K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R443	128.0	143.0	911 436805DA	REF-MF,680,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R444	172.4	175.0	911 311507JF	REF-MO,1.5,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	







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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R445	175.6	189.9	911 339107JA	REF-MO,910,5%,2W	350V,-200 TO +200PPM/C,R-AXIAL	
R446	85.5	113.4	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R447	74.0	49.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R448	169.5	191.9	911 162207DA	REF-CF,220K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
R449	79.0	49.5	911 136807YA	REF-CF,680,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R450	79.9	37.8	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R451	105.9	52.4	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R453	64.5	96.5	911 135607YA	REF-CF,560,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R455	57.0	117.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R456	94.9	120.6	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R457	163.9	154.8	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R458	177.9	171.3	911 348207JF	REF-MO,8.2K,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R459	151.6	100.5	911 333907LF	REF-MO,390,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R460	145.7	118.4	911 334707LF	REF-MO,470,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R461	208.0	158.9	911 311507LFXA	REF-MO,1.5,5%,3W	-,350 TO +350PPM/C,R-AXIAL	
R462	75.3	124.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R463	78.9	62.1	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R467	163.3	139.5	911 351507LF	REF-MO,15K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R469	118.9	114.7	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R471	54.7	32.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R472	165.6	234.6	911 331807JF	REF-MO,180,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R473	170.1	219.1	911 814707FA	REF-FUSIBLE,4.7,5%,1/2W	250V,-500 TO +500PPM/C,R-AXIAL	
R476	299.8	168.9	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-,350 TO +350PPM/C,R-AXIAL	
R477	307.2	185.4	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R478	303.1	185.4	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R479	295.9	204.0	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-,350 TO +350PPM/C,R-AXIAL	
R480	291.9	204.0	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-,350 TO +350PPM/C,R-AXIAL	
R481	85.3	9.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R482	76.0	18.1	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R483	62.6	27.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R484	94.9	210.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R485	113.3	219.0	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R486	115.8	202.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R487	115.8	205.2	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R488	113.7	215.2	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R489	119.1	205.2	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R490	119.1	202.6	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R491	119.9	215.2	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R493	129.7	203.0	911 122207FF	REF-CF,22,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R494	126.0	232.5	911 161007DA	REF-CF,100K,5%,1/4W	250V,-600 TO -150PPM/C,R-AXIAL	
R496	106.9	212.9	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R497	88.4	207.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R498	122.4	219.6	911 311207GF	REF-MO,1.2,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R499	128.0	140.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R501	163.0	132.5	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R502	290.0	132.1	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R503	290.0	141.1	911 135607YA	REF-CF,560,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R504	298.2	123.9	911 131007FF	REF-CF,100,5%,1/2W	350V,-1300 TO +350PPM/C,R-AXIAL	
R505	298.2	137.1	911 132207FF	REF-CF,220,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R506	249.6	157.3	911 312707JF	REF-MO,2.7,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R507	228.1	108.7	911 811807JA	REF-FUSIBLE,1.8,5%,2W	-, -350 TO +350PPM/C,R-AXIAL	
R508	202.9	156.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R509	179.0	141.3	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R510	192.9	155.0	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R511	188.6	134.6	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R512	200.4	132.6	911 112207DA	REF-CF,2.2,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R513	201.4	135.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R514	212.5	145.0	911 145107YA	REF-CF,5.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R515	230.9	184.0	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R516	272.5	229.2	911 157507YA	REF-CF,75K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R517	216.8	130.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R518	182.8	123.7	911 135607FF	REF-CF,560,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R601	294.5	35.5	911 263308FA	REF-CC,330K,10%,1/2W	350V,-,R-AXIAL	
R602	259.7	79.5	911 355607LF	REF-MO,56K,5%,3W	500V,-200 TO +200PPM/C,RE-RADIA	
R603	243.1	75.5	911 355607LF	REF-MO,56K,5%,3W	500V,-200 TO +200PPM/C,RE-RADIA	
R604	259.7	85.6	911 356807LF	REF-MO,68K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R605	234.5	26.5	911 346807LF	REF-MO,6.8K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R606	240.8	26.5	911 346807LF	REF-MO,6.8K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R607	265.8	26.0	911 116807DA	REF-CF,6.8,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R608	247.5	32.5	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R609	237.7	47.5	911 601807GV	REF-WW,0.18,5%,1W	-, -100 TO +100PPM/C,R-AXIAL	
R610	244.7	10.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R611	269.7	20.5	911 451005DA	REF-MF,10K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL,	
R612	221.9	23.0	911 149107YA	REF-CF,9.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R613	250.5	20.5	911 155107YA	REF-CF,51K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R614	247.5	17.0	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R615	255.9	9.5	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R616	266.0	34.0	911 151507FF	REF-CF,15K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R617	272.2	40.4	911 451005DA	REF-MF,10K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R618	257.9	81.7	911 165607FA	REF-CF,560K,5%,1/2W	350V,-1000 TO -500PPM/C,R-AXIAL	
R619	247.1	75.5	911 165607FA	REF-CF,560K,5%,1/2W	350V,-1000 TO -500PPM/C,R-AXIAL	
R620	241.5	63.9	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R621	180.3	44.8	911 321007JF	REF-MO,10,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R622	156.8	40.5	911 164707FF	REF-CF,470K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R623	173.0	20.0	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R624	158.1	62.6	911 164707FF	REF-CF,470K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R625	209.5	94.0	911 168207YA	REF-CF,820K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R626	203.5	105.4	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R627	183.3	100.6	911 156807YA	REF-CF,68K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R628	192.2	98.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R629	189.1	110.2	911 161007YA	REF-CF,100K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R630	142.1	91.2	911 312707LF	REF-MO,2.7,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R631	138.3	105.4	911 311207JF	REF-MO,1.2,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R632	175.1	26.0	911 131507FF	REF-CF,150,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R633	160.5	20.0	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R634	169.8	22.5	911 153307FF	REF-CF,33K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R635	160.5	17.0	911 141507FF	REF-CF,1.5K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R636	200.0	15.0	911 155607YA	REF-CF,56K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R637	201.9	12.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R638	195.4	9.9	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R639	162.5	5.7	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R640	160.8	37.4	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R641	169.0	31.5	911 321007JF	REF-MO,10,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R642	164.2	105.5	911 327507GF	REF-MO,75,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R643	159.9	117.9	911 805607FA	REF-FUSIBLE,0.56,5%,1/2W	-, -350 TO +350PPM/C,R-AXIAL	
R645	213.5	117.9	911 131007FF	REF-CF,100,5%,1/2W	350V,-1300 TO +350PPM/C,R-AXIAL	
R646	263.2	116.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R647	299.9	189.0	911 331507JF	REF-MO,150,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL,	
R648	168.3	82.8	911 802207GA	REF-FUSIBLE,0.22,5%,1W	-, -350 TO +350PPM/C,R-AXIAL	
RL401	144.4	207.0	927 300063AB	RELAY-MINIATURE,12V	2FORMC,5A,530mW,15mS,5mS	
RL601	275.5	102.7	927 300063BC	TMP G4W-2212P	MM,5.15,5.3,0,CC,0.8,0.8,0.254	
RL602	273.6	103.1	927 300063BC	RELAY-MINIATURE,24V	1FORMA,10A,530mW,15mS,5mS	
SW201	14.0	224.5	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW202	13.9	123.5	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW203	22.1	184.4	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW204	14.0	176.5	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW205	14.0	139.4	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW206	14.0	240.6	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW207	14.0	208.6	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW208	13.9	160.6	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW209	6.0	184.4	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW210	13.9	192.6	933 213005AB	SWITCH-TACT,2P,669.5MM	-,12VDC,50MA,SPST,LOCK	
SW401	172.2	222.4	933 110034TC	SWITCH-TOGGLE,SP3T	-, -, -, ON-ON-ON,STRAIGHT,-	
SW601	299.5	17.5	933 210085AB	SWITCH-KEY,SPST	250V,5A,SPST,Y,ANGLE	
SW602	299.5	26.4	933 217004AA	SWITCH-KEY,DPST	250V,-,80A,DPST,Y,LUG	
T401	170.6	159.9	923 460169CA	TRANS-HORIZ,DRIVE	EE-2017,20X17MM,17T,CMB	
T402	269.0	180.5	923 460161AB	TRANS-FBT,1.03mH	FTX-14A013	
T403	197.0	178.6	TMP MB547_H_0	TRANS-H/V REG.CFA7679	EI 28X20MM,CFA7679(PIN TYPE)	
T501	275.9	142.9	TMP M17L7P	TRANS-HDT	CST767,T501,19X16MM,EI1916	
T601	215.0	32.0	923 460161AA	TRANS-POWER,110/220,FREE	ER4042,85/50/24/6/8.3/-12V	
T602	248.5	106.7	923 460082BA	TRANS-SYNC,250UH	C/MONITOR,CVL 4951	
T700	269.0	180.4	923 460161BA	TRANS-FBT,1.03mH	HFL1327M-RC(HIT)	
TH601	273.0	88.0	897 110521AA	THER,8 OHM,DISK,13MM	-, -, -	
TP601	165.2	40.2	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
VAR601	301.8	52.0	897 130528AA	VARI,679-829V,AXIAL,12MM	640V,480V,-,270PF	
VR171	9.0	86.5	913 152007YANA	RES-VAR,ROTARY,20K,5/6TN	20%,0.05W,SIDE,300,NON-CLIP	
VR172	9.0	62.5	913 152007YANA	RES-VAR,ROTARY,20K,5/6TN	20%,0.05W,SIDE,300,NON-CLIP	
VR401	105.9	52.4	913 445008BF	RES-VAR,SF-ROUND,5KOHM	30%,0.1W,SIDE	
VR402	105.5	55.8	913 445009VA	RES-VAR,SF-ROUND,5KOHM	25%,0.2W,TOP,260,9.0X5.TURN,4M	
VR501	174.5	239.0	913 455008BF	RES-VAR,SF-ROUND,50KOHM	30%,0.1W,SIDE	
VR601	171.5	11.7	913 435008BH	RES-VAR,SF-ROUND,500OHM	30%,0.1W,TOP,220, -, -, -	
WI201	305.5	146.9	931 412503BD	WIRE-TCWA,7X0.254	TCWA,PVC,7X0.254,BLACK,1015,22	
WI401	309.5	238.5	931 412503BD	WIRE-TCWA,7X0.254	TCWA,PVC,7X0.254,BLACK,1015,22	
X201	99.4	175.9	941 130073AA	OSC-CLOCK,8M,100	-,5V,40MA,10NS,1 TO 10 TTL	








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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
VIDEO PCB PARTS						
BD101	97.0	63.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD102	67.0	14.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD103	66.0	20.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD104	127.8	84.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD105	98.3	104.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD106	32.5	82.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD107	142.5	77.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD108	101.0	74.3	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C101	39.8	6.0	917 123220CM	CAP-AL.ELEC,227M,1C	(T)16V 220M	
C103	5.2	22.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C104	10.8	22.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C105	42.5	20.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C106	45.3	13.0	917 122220HM	CAP-AL.ELEC,226M,1H	(T)50V 22M	
C107	42.5	24.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C108	25.3	72.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C109	30.8	72.3	917 123100CM	CAP-AL.ELEC,107M,1C	(T)16V 100M	
C111	42.5	69.0	917 123220CM	CAP-AL.ELEC,227M,1C	(T)16V 220M	
C112	13.0	77.0	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C114	109.5	16.5	917 121330QM	CAP-AL.ELEC,335M,2E	(T)250V 3.3M	
C115	83.0	28.0	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C116	88.0	65.5	915 324220YKPH	CAP-CERAMIC,222K,3D,DISK	(T)2.2NF,2KV,10%,Y5P	
C120	7.0	56.0	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C121	40.0	15.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C122	15.8	55.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C123	25.6	55.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C124	50.5	8.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C125	81.8	4.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C126	143.0	80.0	917 122100CM	CAP-AL.ELEC,106M,1C	(T)10UF,16V,20%,R-RADIAL,GP,5MM	
C150	110.8	25.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C151	94.3	38.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C152	92.5	29.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
C153	97.8	33.8	915 312330HJHH	CAP-CERAMIC,330J,1H,SL	33PF,50V,5%,P350TON1000PPM,SL	
C154	102.5	28.5	915 312270HJXH	CAP-CERAMIC,270J,1H,NPO	27PF,50V,5%,NPOPPM,NPO	
C155	106.0	28.5	915 312270HJXH	CAP-CERAMIC,270J,1H,NPO	27PF,50V,5%,NPOPPM,NPO	
C156	98.5	43.5	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C157	102.7	48.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C158	134.5	71.5	917 123100CM	CAP-AL.ELEC,107M,1C	(T)16V 100M	
C159	142.8	33.3	915 313150HJXH	CAP-CERAMIC,151J,1H,NPO	150PF,50V,5%,-,NPOPPM,NPO	
C160	142.8	37.5	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C161	134.8	46.5	915 312330HJHH	CAP-CERAMIC,330J,1H,SL	33PF,50V,5%,P350TON1000PPM,SL	
C162	121.8	45.0	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM,SL	
C163	121.8	38.3	915 313330HJHH	CAP-CERAMIC,331J,1H,SL	330PF,50V,5%,SL,RADIAL	
C164	114.0	20.8	915 313150HJXH	CAP-CERAMIC,151J,1H,NPO	150PF,50V,5%,-,NPOPPM,NPO	
C165	123.0	20.8	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM,SL	
C169	140.5	12.5	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
CB01	34.0	27.5	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
CB02	38.7	22.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
CB03	42.5	52.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CB04	52.8	30.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	00NF,50V,-20 TO 80%,-82TO22%	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
CB11	49.8	101.5	915 312560HJHH	CAP-CERAMIC,560J,1H,SL	56PF,50V,5%,P350TON1000PPM,SL	
CB12	38.8	89.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CB13	95.5	105.3	917 122100LM	CAP-AL.ELEC,106M,2A	(T)100V 10M	
CB14	68.0	89.0	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CB15	143.0	103.0	917 121220NM	CAP-AL.ELEC,225M,2C	(T)160V 2.2M	
CB16	38.5	104.0	915 311560HDXH	CAP-CERAMIC,5R6D,1H,NPO	5.6PF,50V,0.5PF%,NPOPPM,NPO	
CG01	24.5	27.5	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
CG02	29.2	22.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
CG03	34.3	50.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CG04	47.0	35.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CG11	95.0	89.0	915 312560HJHH	CAP-CERAMIC,560J,1H,SL	56PF,50V,5%,P350TON1000PPM,SL	
CG12	86.0	83.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CG13	126.0	98.3	917 122100LM	CAP-AL.ELEC,106M,2A	(T)100V 10M	
CG14	109.3	73.3	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CG15	143.0	95.0	917 121220NM	CAP-AL.ELEC,225M,2C	(T)160V 2.2M	
CG16	87.0	92.0	915 311560HDXH	CAP-CERAMIC,5R6D,1H,NPO	5.6PF,50V,0.5PF%,NPOPPM,NPO	
CN1	22.0	103.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN2	22.0	83.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN3	28.0	103.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN4	28.0	83.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN5	114.3	78.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN6	114.3	98.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN7	120.3	78.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN8	120.3	98.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN9	54.3	104.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN011	55.5	3.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN10	54.3	84.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN11	60.3	104.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN12	60.3	84.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN101	6.0	18.5	935 240906DV	CON-WALL HEADER,6P,2.5MM	STRAIGHT,-,SN	
CN102	65.5	3.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN103	73.5	22.0	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN104	101.0	58.8	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN203	72.8	12.5	935 240912DB	CON-WALL HEADER,12P,2.5	STRAIGHT,1WALL,SN	
CN204	144.8	8.5	935 240111DA	CON-BOX HEADER,11P,2.5MM	1R,SRTAIGHT,SN	
CR01	15.0	27.5	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
CR02	19.8	22.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
CR03	7.0	51.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CR04	7.0	47.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CR11	7.0	60.5	915 312560HJHH	CAP-CERAMIC,560J,1H,SL	56PF,50V,5%,P350TON1000PPM,SL	
CR12	7.0	86.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
CR13	19.5	77.0	917 122100LM	CAP-AL.ELEC,106M,2A	(T)100V 10M	
CR14	32.5	85.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CR15	143.0	87.0	917 121220NM	CAP-AL.ELEC,225M,2C	(T)160V 2.2M	
CR16	7.0	72.5	915 311560HDXH	CAP-CERAMIC,5R6D,1H,NPO	5.6PF,50V,0.5PF%,NPOPPM,NPO	
CRT1	0.0	0.0	897 250149AA	CRT,COLOR 15	M36KUT23XX02(FB1R)	
D101	139.0	77.0	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D102	2.0	83.0	893 290031AA	DIODE-ZEN,UZ-8.2BL,D0-35	0.5W,-,10MA,-,-,-	
D103	90.0	23.0	893 314007BA	DIODE-REC,1N4007GP,D0-41	1000V,1A,1.1V,1A,2uS	
D104	79.0	19.5	893 314007BA	DIODE-REC,1N4007GP,D0-41	1000V,1A,1.1V,1A,2uS	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
D161	130.5	23.6	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D162	122.5	15.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D163	141.0	23.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB01	26.0	15.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB02	28.5	7.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB03	123.5	66.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB11	57.5	91.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB12	60.0	99.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB13	73.0	81.3	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DG01	18.0	15.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG02	20.5	7.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG03	123.5	63.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG11	124.0	103.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG12	128.5	94.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG13	117.5	89.5	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DR01	15.5	15.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR02	13.0	7.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR03	124.5	59.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR11	12.0	91.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR12	26.5	90.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR13	80.5	84.3	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
HSB12	102.1	92.2	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
HSG12	42.6	95.7	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
HSR12	9.6	94.7	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
IC101	11.0	32.0	881 101207AA	IC-LIN,LM1207,VIDEO AMP	DIP,28,TRIPLE	
IC102	139.5	82.0	887 490050AA	MV17B,10P	IC-HYB,CMH7379,VIDEO-CUT	
IC103	111.0	46.5	881 699008AA	IC-LIN,141540,OSD	DIP,16,-,-	
IC104	127.5	65.8	873 760125AA	IC-MOS,74HC125,QUAD	DIP,4,300MIL,QUAD	
JP1	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP2	66.0	17.3	955 005001AAAB	JUMPER	JUMPER	
JP3	40.5	11.8	955 005001AAAB	JUMPER	JUMPER	
JP4	5.8	45.0	955 005001AAAB	JUMPER	JUMPER	
JP5	8.3	45.0	955 005001AAAB	JUMPER	JUMPER	
JP6	47.0	42.0	955 005001AAAB	JUMPER	JUMPER	
JP7	34.0	52.5	955 005001AAAB	JUMPER	JUMPER	
JP8	43.5	50.0	955 005001AAAB	JUMPER	JUMPER	
JP9	26.8	50.0	955 005001AAAB	JUMPER	JUMPER	
JP10	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP11	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP12	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP13	59.0	72.5	955 005001AAAB	JUMPER	JUMPER	
JP14	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP15	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP16	98.3	83.0	955 005001AAAB	JUMPER	JUMPER	
JP17	131.5	93.0	955 005001AAAB	JUMPER	JUMPER	
JP18	134.0	99.0	955 005001AAAB	JUMPER	JUMPER	
JP19	136.5	102.0	955 005001AAAB	JUMPER	JUMPER	
JP20	134.5	68.5	955 005001AAAB	JUMPER	JUMPER	
JP21	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP22	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP23	112.6	11.0	955 005001AAAB	JUMPER	JUMPER	



(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP24	94.0	16.5	955 005001AAAB	JUMPER	JUMPER	
JP25	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP26	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP27	103.0	10.0	955 005001AAAB	JUMPER	JUMPER	
JP28	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP29	126.0	12.3	955 005001AAAB	JUMPER	JUMPER	
JP31	72.5	7.5	955 005001AAAB	JUMPER	JUMPER	
JP33	116.8	22.5	955 005001AAAB	JUMPER	JUMPER	
JP36	89.0	85.0	955 005001AAAB	JUMPER	JUMPER	
JP38	143.0	28.0	955 005001AAAB	JUMPER	JUMPER	
JP39	90.0	16.5	955 005001AAAB	JUMPER	JUMPER	
JP40	0.0	0.0	955 005001AAAB	JUMPER	JUMPER	
JP41	16.8	50.0	955 005001AAAB	JUMPER	JUMPER	
JP42	36.0	62.0	955 005001AAAB	JUMPER	JUMPER	
JP43	85.0	107.5	955 005001AAAB	JUMPER	JUMPER	
JP44	87.5	107.5	955 005001AAAB	JUMPER	JUMPER	
JP45	108.0	44.0	955 005001AAAB	JUMPER	JUMPER	
L101	142.5	62.5	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
L102	53.3	10.8	925 001001AN	INDUCTOR-AXIAL,220UH	FIX,220UH,10%,4X10.5MM	
L103	105.5	35.5	925 001002AJ	INDUCTOR-AXIAL,150UH	FIX,150UH,10%,50,-,2.6X7MM	
LB01	44.0	89.5	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
LB02	65.5	105.5	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
LG01	107.0	87.0	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
LG02	113.5	82.0	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
LR01	12.0	93.5	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
LR02	23.0	98.5	925 001002AK	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,50,-,2.6X7MM	
Q161	140.5	41.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q162	129.8	38.5	891 393646AA	TR-NPN,MPS3646,TO-92,EBC	-,40V,15V,5V,0.3A	
Q163	129.8	34.0	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q164	119.5	15.8	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q165	138.5	26.3	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
QB01	45.3	58.8	891 325770AA	TR-NPN,2N5770,TO-92	0.45W,30V,15V,4.5V,8MA	
QB11	50.1	95.0	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
QB12	39.5	98.0	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,3V,0.2A	
QB13	79.8	100.3	891 325551AB	AM TR-NPN,2N5551C-Y,TO-92	ST 02139-301-488	
QB14	65.5	101.8	891 125401AB	AM TR-PNP,2N5401C-Y,TO-92	ST 02139-101-158	
QG01	45.3	63.0	891 325770AA	TR-NPN,2N5770,TO-92	0.45W,30V,15V,4.5V,8MA	
QG11	92.0	85.8	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
QG12	99.0	94.5	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
QG13	116.5	103.0	891 325551AB	AM TR-NPN,2N5551C-Y,TO-92	ST 02139-301-488	
QG14	92.5	98.0	891 125401AB	AM TR-PNP,2N5401C-Y,TO-92	ST 02139-101-158	
QR01	11.0	59.0	891 325770AA	TR-NPN,2N5770,TO-92	0.45W,30V,15V,4.5V,8MA	
QR11	6.5	75.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
QR12	6.5	97.0	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
QR13	17.5	80.5	891 325551AB	AM TR-NPN,2N5551C-Y,TO-92	ST 02139-301-488	
QR14	33.0	98.0	891 125401AB	AM TR-PNP,2N5401C-Y,TO-92	ST 02139-101-158	
R101	8.0	21.5	911 123307YA	REF-CF,33.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R102	50.5	18.0	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R103	44.0	15.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R104	48.3	27.5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

( ⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R106	139.0	54.5	911 134707DA	REF-CF,470,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R107	33.0	69.5	911 121007YA	REF-CF,10,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R108	20.0	59.5	911 449105DA	REF-MF,9.1K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R109	35.0	55.0	911 442705DA	REF-MF,2.7K,1%,1/4W	250V,-100 TO +100PPM/C	
R110	29.0	64.5	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R111	36.3	79.0	911 133907FF	REF-CF,390,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R112	86.5	45.5	911 231008FA	REF-CC,100,10%,1/2W	350V,-R-AXIA2Q	
R113	93.0	59.3	911 231008FA	REF-CC,100,10%,1/2W	350V,-R-AXIA2Q	
R151	100.5	39.5	911 164707YA	REF-CF,470K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R152	93.0	48.5	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R153	95.5	48.5	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R154	103.0	33.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R155	117.0	56.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R156	116.0	54.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R157	124.3	43.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R158	143.0	47.3	911 137507YA	REF-CF,750,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R159	96.5	16.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R160	99.0	16.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R161	137.5	46.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R162	132.3	46.3	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R163	124.3	40.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R164	126.9	33.5	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R165	143.0	30.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R166	122.5	18.3	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R167	133.5	15.5	911 155107YA	REF-CF,51K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R168	125.0	30.5	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R169	136.0	23.5	911 155107YA	REF-CF,51K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R170	138.5	15.5	911 161207YA	REF-CF,120K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB01	31.0	15.5	911 427505DA	REF-MF,75,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
RB02	28.8	18.5	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB05	55.0	28.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB06	49.5	55.5	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB07	48.0	66.0	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB08	55.5	75.0	911 121007YA	REF-CF,10,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB09	49.5	58.0	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB11	39.5	101.0	911 131507YA	REF-CF,150,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB12	44.3	98.5	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB13	44.0	92.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RB14	60.3	104.0	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RB15	54.3	104.0	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RB16	62.8	88.5	911 825607DA	REF-FUSIBLE,56,5%,1/4W	-, -350 TO +350PPM/C,R-AXIAL	
RB17	70.5	92.3	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RB18	75.5	81.3	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RB19	65.3	82.5	911 223908FA	REF-CC,39,10%,1/2W	350V,-R-AXIAL	
RB20	68.5	103.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB21	80.5	97.8	911 823307DA	REF-FUSIBLE,33,5%,1/4W	-, -350 TO +350PPM/C,R-AXIAL	
RG01	23.0	15.5	911 427505DA	REF-MF,75,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
RG02	19.3	18.5	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG05	55.0	25.5	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG06	49.5	63.0	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG07	53.0	66.0	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	




( ⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
RG08	50.5	75.0	911 121007YA	REF-CF,10.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG09	49.5	60.5	911 133907YA	REF-CF,390.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG11	92.0	88.5	911 131507YA	REF-CF,150.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG12	89.5	88.5	911 123307YA	REF-CF,33.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG13	112.8	87.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RG14	114.3	78.5	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RG15	120.3	78.5	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RG16	104.0	87.0	911 825607DA	REF-FUSIBLE,56.5%,1/4W	-,350 TO +350PPM/C,R-AXIAL	
RG17	127.0	87.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG18	117.5	92.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG19	108.5	69.5	911 223908FA	REF-CC,39,10%,1/2W	350V,-R-AXIAL	
RG20	118.0	84.5	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG21	110.0	98.0	911 823307DA	REF-FUSIBLE,33.5%,1/4W	-,350 TO +350PPM/C,R-AXIAL	
RR01	10.5	15.5	911 427505DA	REF-MF,75,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
RR02	9.8	18.5	911 127507YA	REF-CF,75.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR05	55.0	23.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR06	15.5	63.0	911 133907YA	REF-CF,390.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR07	10.5	63.0	911 122207YA	REF-CF,22.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR08	33.0	67.0	911 121007YA	REF-CF,10.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR09	13.0	63.0	911 133907YA	REF-CF,390.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR11	5.5	69.5	911 131507YA	REF-CF,150.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR12	8.0	69.5	911 122207YA	REF-CF,22.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR13	12.0	96.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RR14	28.0	103.5	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RR15	22.0	103.5	911 343607LF	REF-MO,3.6K,5%,3W	500V,-350 TO +350PPM/C,R-AXIAL	●
RR16	29.5	88.0	911 825607DA	REF-FUSIBLE,56.5%,1/4W	-,350 TO +350PPM/C,R-AXIAL	
RR17	78.0	92.3	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR18	72.5	95.3	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR19	82.8	82.5	911 223908FA	REF-CC,39,10%,1/2W	350V,-R-AXIAL	
RR20	18.5	101.0	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR21	12.0	88.5	911 823307DA	REF-FUSIBLE,33.5%,1/4W	-,350 TO +350PPM/C,R-AXIAL	
SINGLE	0.0	0.0	935 720901AESA	CON-JACK CRT SOCKET	PHI29-HIGH FOCUS,SMALL TYPE	
SK1	75.0	55.0	935 720913AA	CON-JACK CRT SOCKET,12P	PHI29_D/F,SMALL TYPE	
<b>OTHERS</b>						
S/CABLE			955 460580AAAA	CBF-SIGNAL CABLE,1850MM,15P	MAL, HDE-15P, IVORY, M15H	  KOREA U.S.A SEUK SEAU EUROPE
CRT			897 250089AA	CRT, COLOR,15" (PHILIPS MPRII)	M36EDR320X131	
CRT			897 250192AA	CRT, COLOR,15" (TOSHIBA MPRII)	M36KUT23XX01	
D-COIL			925 460191AA	COIL-DEGAUSSING, 10.5mH	110T,255X255MM,27.60hm	
CRT GND			955 460543BAAA	CBF-CRT GROUND ASS'Y	CMB547*	
P/CORD			955 001437AAAA	CBF-POWER CORD,1830MM,WALL	MSP-48E,KSC3304,VCTF0.75MMX3C	
P/CORD			955 001434AAAA	CBF-POWER CORD,1850MM,UC	KKP-30,KKS-16A,SVT#3/18,125V,7A	
P/CORD			955 001439AAAB	CBF-POWER CORD,1220MM,EC	EU,LS13/14,H05W-F0.57MMX3,GFC-3	
P/CORD			955 001443AAAA	CBF-POWER CORD,1830MM,AU	SP502B,3ASL/100.IS-14,IVORY	
P/CORD			955 001435AAAA	CBF-POWER CORD,1850MM,EU	KKP-4819R,KKS-16A,220V,6A(HP)	
MAIN PCB ASS'Y			257 211080AALR	ASS'Y-PWA,MAIN	CMB547*	
ASS'Y VIDEO			257 211070AABL	ASS'Y VIDEO	CMB547*	


## Memo

## 12-5 Schematic Diagrams

### Caution

1. The areas shaded or marked with  on the schematic diagram and parts list designate components which have special characteristics important for safety. Replace these parts only with parts identical to those in the original circuit or specified in the parts list. Before replacing any of these components carefully read the "Product Safety Notice."
2. When taking measurements, pay special attention to the following:
  - 1) Do not use your instrument between primary ground (symbol ) and secondary circuit.
  - 2) Do not use your instrument between secondary ground (symbol ) and primary circuit.





### Warning

This equipment contains safety critical components. All parts shown with the  mark on the schematic are safety critical.

Replace safety critical parts with only manufacturers recommended parts. See parts list for exact replacements.

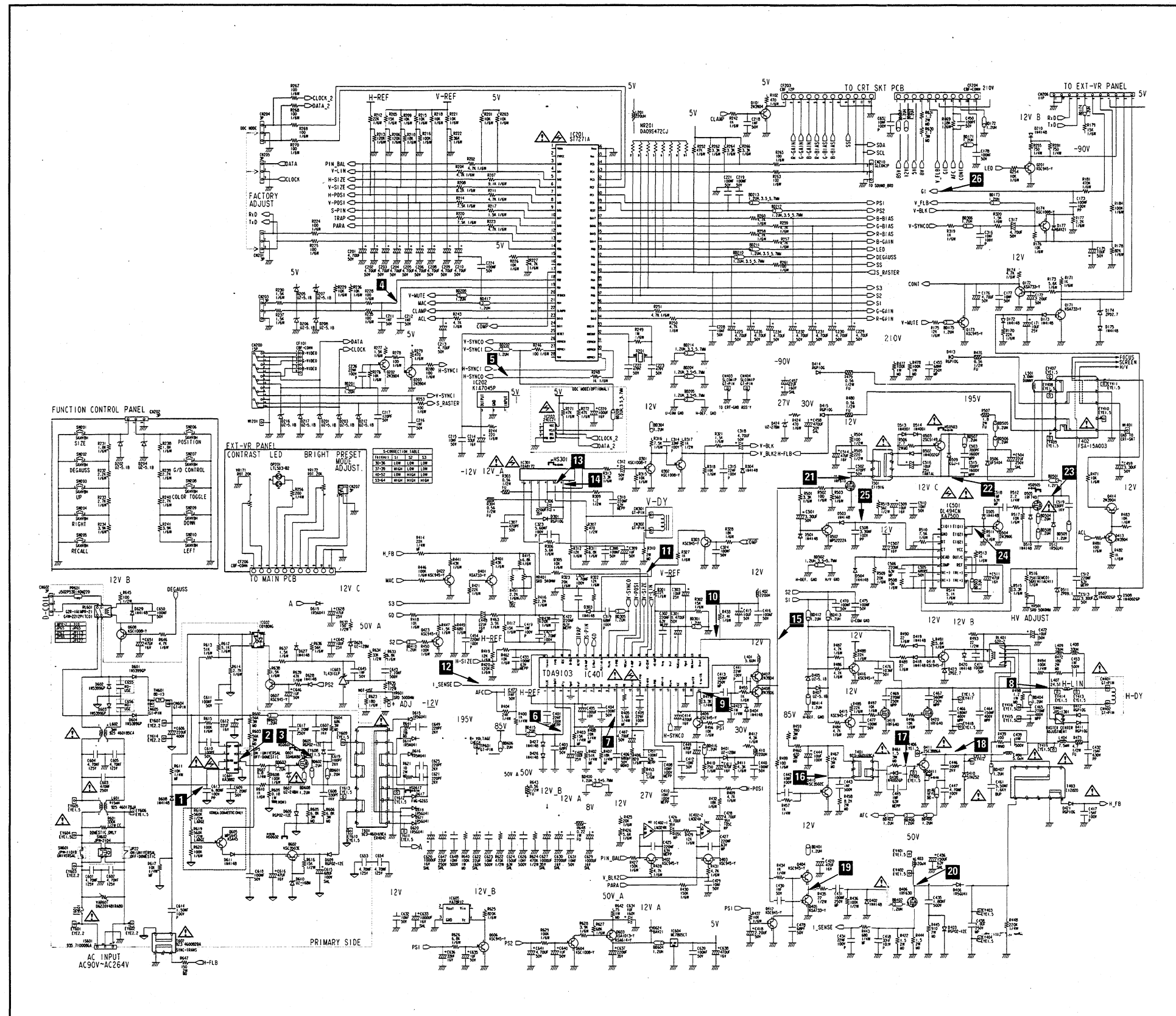
### Note

1. Resistance is shown in OHM. K = 1000 M = 1,000,000 and the rated power of resistors not noted in schematic diagram is 1/4W.
2. Capacitance is shown in  $\mu$ F. Capacitances not otherwise noted are shown in pF ( $1\mu\text{F} = 1,000,000 \text{ pF}$ ). Rated voltage of condensers not otherwise noted in schematic diagram is 50 V.
3. Abbreviations and Symbols
 

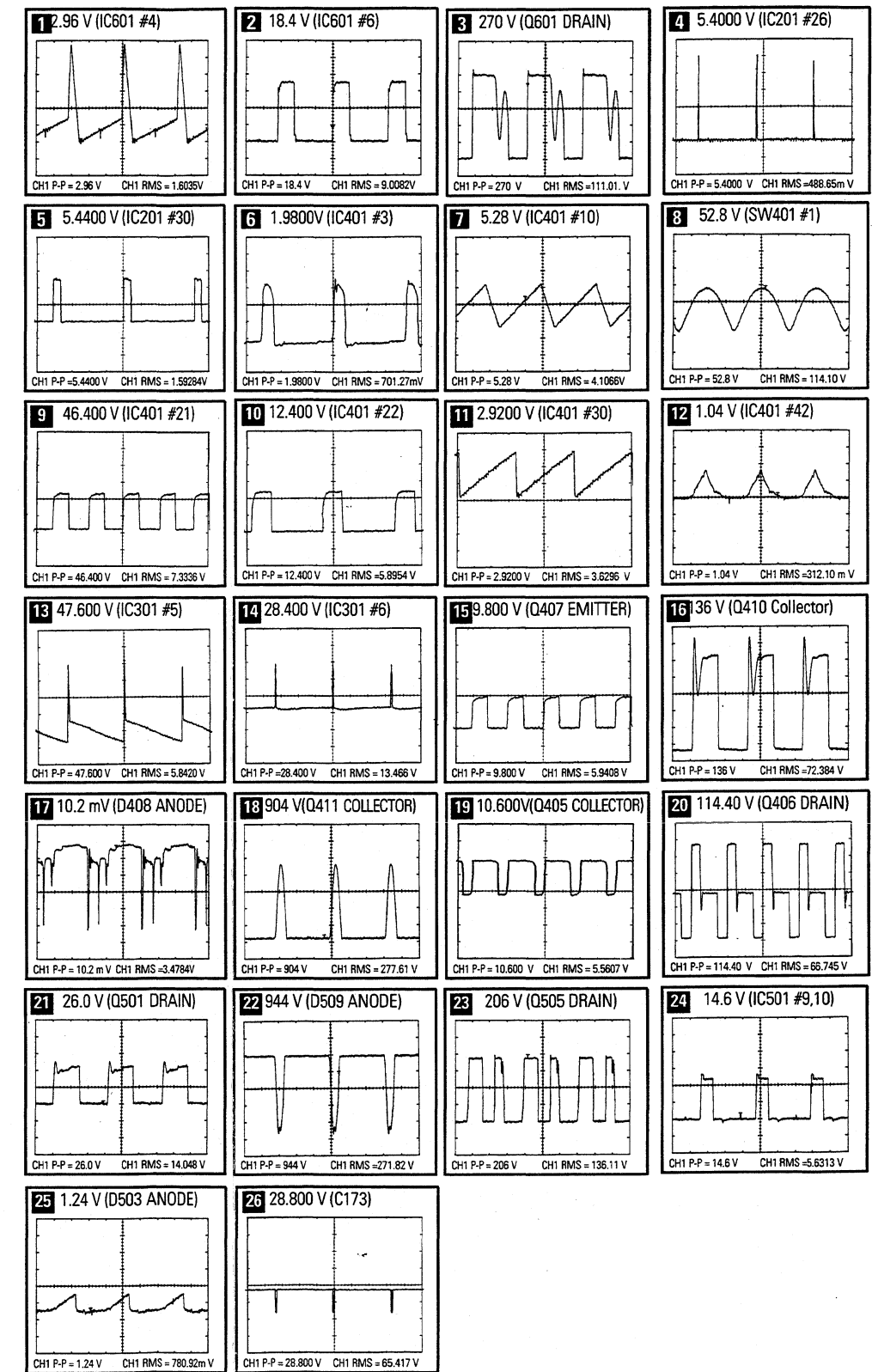
MO R-METAL OXIDE	WW R-WIRE WOUND
FU FUSIBLE	C R-COMPOSITION
CM R-CEMENT MPP METAL POLYPROPYLENE	
MP C-METAL POLYESTOR	PP C-POLYPROPYLENE
P C-POLYESTOR	T C-TANTALIUM
 HOT GROUND	 COLD GROUND
4. The secondary voltage is read with an SSVM from the indicated point to cold ground (). The primary voltage is read with an SSVM from the indicated point to hot ground ()
5. This schematic diagram is subject to change without notice.



### 12-5-1 Main Schematic Diagram and Waveforms



**Power Line**  
**Signal Line**



## 12-5-2 Video Schematic Diagram and Waveforms

